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HUNGRY TIGER EAGER TO GROW

by

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June 2015

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India is a great military power in the world. It is fortifying its military at a fast pace. Thus, the other states in the world have raised a serious question: What drives India to modernize its military? This thesis borrows Sagan's three models—security model, norms model, and domestic-politics model—to address the research question of why India is expanding its military capability. India's military expansion is analyzed using two case studies on nuclear weapons and aircraft carriers to determine which model is the most applicable.

The evidence demonstrated in this thesis suggests that no single model can fully explain this question. The three models—the security, the norms, and the domestic-politics models—are all indispensable pieces to the puzzle of explaining India's military expansion. However, this expansion could result in a security dilemma that provokes its hostile neighbors toward an arms race. That is to say, India's behavior of military expansion might destabilize the region of South Asia.

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HUNGRY TIGER EAGER TO GROW

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ABSTRACT

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LIST OF ACRONYMS AND ABBREVIATIONS

BARC	Bhabha Atomic Research Center
BJP	Bharatiya Janata Party
FMCT	Fissile Material Cutoff Treaty
GDP	gross domestic product
GFP	global firepower
IAF	Indian Air Force
IBGs	integrated battle groups
IN	Indian Navy
IRBM	intermediate-range ballistic missile
J&K	Jammu and Kashmir
NATO	North Atlantic Treaty Organization
NPT	Non-Proliferation Treaty
PLAN	People's Liberation Army Navy
PNE	peaceful nuclear explosion
SAFF	specific safing, arming, fuzing, and firing
SIPRI	Stockholm International Peace Research Institute
SLOC	sea lines of communication
SOPs	standard operating procedures
UN	United Nations
V/STOL	vertical and/or short take-off and landing

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I. INTRODUCTION

Military expansion depends on a state's security needs, wealth, ambition, and its technological resources as well as its domestic politics. According to the Stockholm International Peace Research Institute's (SIPRI) 2013 "Trends in International Arms Transfers" report, India has been the world's biggest weapons buyer since 2010 and has purchased 14 percent of all international arms imports. By contrast, China and Pakistan each only purchased 5 percent of all international arms imports.[1] In the past, India seems to have paid particular attention to China's military decisions. In 2013, China declared that its aircraft carrier had completed testing and was ready for combat. In addition, China announced that it was initiating ballistic missiles and space programs to show off its technological capabilities. After China's announcement, India immediately announced that it was building its first indigenous aircraft carrier and planning the next Mars exploration program in 2017, demonstrating that its military capabilities could compete with those of other major powers.[2]

A. PURPOSE

According to a Global Firepower (GFP) report, India is the fourth largest military power in the world.[3] India is still fortifying its military at a fast pace. Thus, the other states in the world have raised some serious questions: What drives India to modernize its military? Is India just worrying about its hostile neighbors, or is it seeking to become Asia's biggest military power? Many states around the world, especially in the region, want to understand India's real intentions for military-capability expansion because this

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[1] Siemon T. Wezeman and Pieter D. Wezeman, "Trends in International Arms Transfers, 2013," *SIPRI Fact Sheet,* (March 2014): 4, http://books.sipri.org/files/FS/SIPRIFS1403.pdf.

[2] The Times of India, "India Plans Another Mars Mission in 2017–20," July 18, 2014, http://timesofindia.indiatimes.com/india/India-plans-another-Mars-mission-in-2017-20/articleshow/38565995.cms.

[3] Global Firepower, "India Military Strength," accessed May 27, 2014, http://www.globalfirepower.com/country-military-strength-detail.asp?country_id=india. Global Firepower (GFP) provides the latest ranking of world military powers whose nuclear capability is not taken into account. However, the GFP ranking is based on each state's potential conventional war-making capabilities across land, sea, and air. The final ranking also incorporates values related to resources, finances, and geography.

expansion might lead to international tension. *India's Military Modernization*, by Stephen P. Cohen and Sunil Dasgupta, shows that India's economic growth has slowed since 2010; however, the growth of its military spending and military weapons importation has never slowed (as shown in Figure 1).[4]

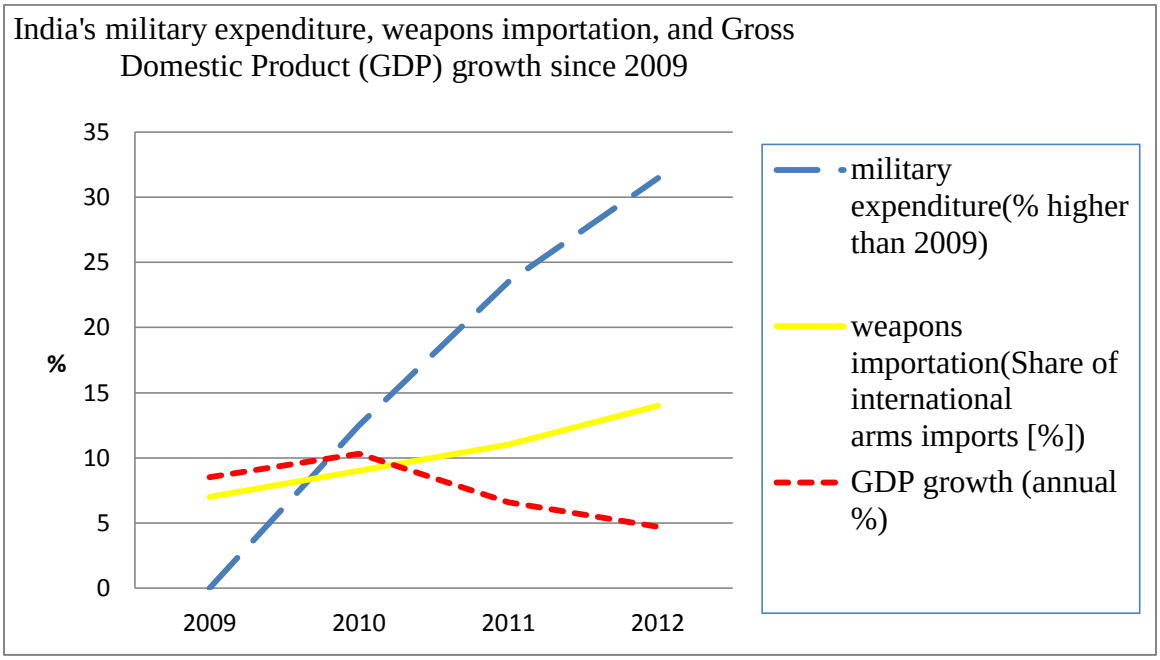

Figure 1. India's Military Expenditure, Weapons Importation, and Gross Domestic Product (GDP) Growth since 2009[5]

Accordingly, this thesis investigates why India has continued to expand its military capability since the partition of 1947. To clarify, it does not address why India possesses or purchases a specific weapon, but instead, why India expands its military power in general. India is already a great power in South Asia that owns robust conventional and nuclear capabilities to provide solid deterrence and security, but it is researching new technology and manufacturing new weapons such as ballistic missiles

[4] Stephen P. Cohen and Sunil Dasgupta, *Arming without Aiming: India's Military Modernization* (Washington, DC: Brookings Institution Press, 2010), xi.

[5] Wezeman and Wezeman, "Trends in international arms transfers, 2013;" GDP Growth (Annual %), The World Bank, Accessed May 21, 2014, http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG; "Data by Country," Accessed August 25, 2014, http://portal.sipri.org/publications/pages/expenditures/country-search.

and aircraft carriers. Many articles discuss the reasons why a state owns nuclear bombs, explain past conflicts and border disputes that affect India's military expansion, and praise India for its economic growth, but most of the literature does not address the reasons for India's continued military expansion broadly. As a result, this thesis seeks to explain why India keeps expanding its military using Sagan's three models: security, norms, and domestic-politics.[6] This thesis applies these three models to two case studies: nuclear weapons and aircraft carriers.

This thesis generates hypotheses for each of the competing models. If the security model is correct regarding India's motivation, I presume that India might want to expand its military capability to provide robust deterrence and national security. If the norms model is correct, however, I presume that India might believe that the expansion of its military capability can enhance its international prestige and national identity. Finally, if the domestic-politics model is accurate, which means that domestic-politics concerns motivate military expansion instead of security or norms concerns, I presume that Indian policymakers might want to use military expansion to increase their public support. This thesis argues that the security model is the most powerful explanation for India's military expansion.

This thesis is divided into five main sections to answer the research question. Chapter I discusses the research question, background information on prior conflicts in South Asia, and the geopolitical conditions of India, China, and Pakistan. Furthermore, Chapter I compares the economy, population, and geopolitics among India, Pakistan, and China to demonstrate that India has the potential to become the regional hegemon. Additionally, the comparison reveals that China is the most probable threat to India. It also establishes that Pakistan, as a weaker state, likes to launch small-scale wars or conflicts to undermine India, and India has a great location to become a hegemonic power. Chapter II explains the three expansion models. This chapter uses the three models to explain why a state expands its military power, and it provides characteristics of the three models. Chapter III describes India's military expansion and applies the three

[6] Scott D. Sagan, "Why Do States Build Nuclear Weapons? Three Models in Search of a Bomb," *International Security* 21, no. 3 (Winter 1996–97): 54–86.

models to determine the reasons why India is expanding its military capability. Finally, Chapter IV offers an overview of the thesis and suggests implications for the region.

B. IMPORTANCE

The study of India's military expansion is significant for three main reasons. First, there is a history of conflict in the region of South Asia. The region's territorial disputes largely contribute to its instability. India has a territorial issue with all of its neighbors—China, Pakistan, and Nepal. The dispute over Kashmir is especially significant and is a triangular problem among India, China, and Pakistan. Various historical conflicts have been caused by this particular dispute. For example, India and Pakistan have had several conflicts since 1965. Such territory disputes are still a major issue among India, China, and Pakistan today.

Second, the region's conflict could escalate due to the prevalence of weapons and tension. Analyzing India's military expansion is crucial because the region's tension might lead to a full-scale nuclear war. The United States and Soviet Union during the Cold War illustrate how an arms race might cause serious conflicts. The arms race between the United States and Russia increased both countries' military forces and their fear of each other. India and China are two major powers in Asia that quarrel with one another, and Pakistan also owns powerful nuclear weapons to deter its neighbors. The existing arms race among the three states might affect security and stability around the region or even around the world. War seems probable for South Asia in the future, so India's new government must determine how to deal with the region's tension and avoid conflicts. South Asia is filled with tension due to its monumental weapons importation and nuclear expansion. India, China, and Pakistan have been the top three arms importers in the world since 2009.[7] Additionally, these three states are the only states that continue to expand their nuclear arsenals.[8] They are unlike other states that own nuclear weapons; other states are decreasing their nuclear weapons under the non-proliferation treaty (NPT).

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[7] Wezeman and Wezeman, "Trends in international arms transfers, 2013," 4.

[8] Shannon N. Kile and Phillip Schell, "Military Spending and Armaments: Nuclear Forces," SIPRI, Accessed May 27, 2014, http://www.sipri.org/research/armaments/nuclear-forces.

Up to now, India and Pakistan have completely rejected the NPT. Therefore, if a territorial dispute or conflict breaks out, nuclear war may well launch in the region.

Third, applying these three models to specific cases in India as well as examining other cases in other countries, helps to determine the utility of these models. That is to say, my thesis aims to help prevent conflict both in South Asia and throughout the world. If people can understand why other states expand their militaries, conflict and war may be reduced or avoided altogether.

C. BACKGROUND

The purpose of this background is to provide a basic understanding of India's past and present situation in order to analyze why India might want to expand its military capability and why policymakers believe that the expansion will lead to a bright future. Therefore, this background demonstrates India's prior military struggles and the current situation of the economy, population, and geopolitics among India and its neighbors. India's previous conflicts might assist in explaining reasons for India's expansion of military capability. Additionally, surveying the status of India's economy, population, and geopolitics as compared to those of China and Pakistan might help explain why India wants to expand its military capability.

1. Conflicts with India's Neighbors

Studying the India-Pakistan and Sino-Indian security relationships can help illuminate India's military policy and predict future trends, and these prior conflicts may be one of the reasons why India continually modernizes its military. Conflicts among China, India, and Pakistan and several border crises have been intermittent since the partition. More importantly, no sign of permanent resolution among these three states seems possible in the foreseeable future. Therefore, the underlying reasons for conflicts among them are an important security issue. The partition of 1947 made uncompromising struggles among India, Pakistan, and China unavoidable due to ambiguous geographic boundaries, irreconcilable ideologies and identities, and an uneven distribution of resources and power.

An ambiguous geographic boundary is one of the most significant contributing factors to the enduring rivalry between India and Pakistan. In terms of the three major wars in 1947, 1965, and 1971 and the border crises, the disagreement over the territorial settlement of Jammu and Kashmir (J&K) is the main cause of these enduring conflicts. Violence seemed to be inevitable, with ambiguous boundaries playing the main role in the conflict between India and Pakistan.

The Kashmir War of 1947 was launched by Pakistan and ended by the United Nations' involvement on January 1, 1949.[9] Most important of all, Pakistan achieved two goals from this war. First, Pakistan raised the territorial dispute as an international issue that attracted the United Nations' attention. Pakistan could use this third party to solve the territorial disputes in South Asia. On the other hand, India wanted to limit the territorial issue to a bilateral one. Second, Pakistan successfully captured roughly one-third of Kashmir from India's control.[10] Although Pakistan did not win this war, Pakistan knew that this kind of small-scale war was a good strategy to cope with India because it could bleed India and solidify itself.

The Indo-Pakistani War of 1965, also known as the Second Kashmir War, focused on the territorial dispute over Kashmir. As with the First Kashmir War, the United Nations played an important role in stopping the deadlock of the Indo-Pakistani War of 1965. The United Nations Security Council figured out a resolution for the Second Kashmir War on September 20, 1965. Separately, India and Pakistan accepted this resolution on September 21 and 22.[11] Ultimately, this war did not change anything but showed Pakistan's proneness to conflict with India. Under the Tashkent Agreement, both sides agreed to maintain the status quo and peacefully solve future disputes.[12]

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[9] Sumit Ganguly, *The Origins of War in South Asia: Indo-Pakistani Conflicts Since 1947*, (Boulder, CO: Westview Press, 1994), 14.

[10] Sumit Ganguly and S. Paul Kapur, *India, Pakistan, and the Bomb: Debating Nuclear Stability in South Asia*, (New York: Columbia University Press, 2010), 12.

[11] Ganguly, *The Origins of War in South Asia*, 48.

[12] Ganguly and Kapur, *India, Pakistan, and the Bomb*, 14.

Pakistan launched the Indo-Pakistan War of 1971 with air strikes on India's military bases around its northwestern region on December 3, 1971.[13] India fought back quickly, and the Indian Air Force (IAF) destroyed some Pakistani air bases. India's overwhelming victory proved that its military power was superior to Pakistan. At the end of the war, both India and Pakistan signed the Simla Agreement, agreeing to cease military conflict around the border and focusing on two aspects.[14] First, both sides came to an agreement to resolve future disputes "bilaterally."[15] Additionally, the Simla Agreement also transformed the cease-fire line into the Line of Control (LOC).

Besides the three major wars over J&K, there were other border crises. The Kargil War of 1998 was India's first time to use air strikes to remind Pakistan of its strong conventional power. Kargil is a town that crossed the LOC in the Himalayas. Under American diplomatic pressure, Pakistan withdrew from India's territory and ended the war.[16] Additionally, Pakistani terrorists attacked the Indian Parliament on December 13, 2001, and caused the border crisis of 2001. The Indian Parliament event took place right after the J&K Legislative Assembly bombing and 9/11 on the same year. Consequently, India's Union Cabinet made a "preemptive war" doctrine and promised to "liquidate the terrorists and their sponsors wherever they are, whoever they are."[17] Then, India sent its 800,000 troops to the Indo-Pakistan border and announced that India was ready for a fight. Both India and Pakistan's armed forces were prepared and kept on high alert because of their long-standing enmity. India made war seem imminent but withdrew its troops under the United States' diplomatic pressure in October 2002.[18]

India and Pakistan have not drawn a clear territorial boundary over the state of J&K since the partition of 1947, and India will not easily give up Kashmir for two

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[13] Ganguly, *The Origins of War in South Asia*, 81.

[14] Mithilesh Kumar Singh, *Military Strength of India & Pakistan*, (Delhi, India: Prashant Publishing House, 2008), 225.

[15] Ganguly and Kapur, *India, Pakistan, and the Bomb*, 15.

[16] Russell F. Leng, "Realpolitik and Learning in the India-Pakistan Rivalry," in *The India-Pakistan Conflict: An Enduring Rivalry*, ed. T. V. Paul (New York: Cambridge University Press, 2005), 114–15.

[17] Ibid., 121–22.

[18] Ibid., 122.

reasons. First, giving away Kashmir would present weakness. Second, the Indian government worries about the chain reaction of independence that could happen in different provinces of India. If India gave Kashmir is independence, other regions would want independence as well. India is a multiethnic state that just received independence from the British in 1947, so if India gave away Kashmir, other provinces would likely follow suit. That is to say, India is motivated to make every effort to keep Kashmir under its control. Although India is not willing to actively fight with Pakistan over unsettled territory, it will fight for its current territorial integrity.

On the other hand, Pakistan argues that Kashmir should belong to Pakistan because the majority of the population is Muslim. Pakistan has tried many approaches such as unilaterally making a new map to redefine the boundary between it and India. Additionally, Pakistan refuses to compromise during the negotiations. Moreover, Pakistan is dedicated to using armed force to seize the predominantly Muslim province from India's control because taking a firm stand on unsettled territory is one way to get support from a domestic electorate. Along the same line, the Bharatiya Janata Party (BJP) in India used anti-Muslim propaganda to grow its political power and win campaigns in 1992.[19]

Along the same lines, the boundary between India and China has been obscured and argued over for more than five decades since the Sino-Indian War of 1962. The Sino-Indian War of 1962 is the biggest conflict of many territorial disputes with heavy casualties. On September 8, 1962, the Chinese Army crossed over the Kameng division of the North East Frontier Agency (NEFA).[20] China's troops entered India's side of the McMahon Line, which is in the east of India's frontier. India used armed forces to expel China's soldiers out of India's territory. China's last and significant assault occurred from November 16–19, 1962; then, China announced a ceasefire and withdrew its troops from

[19] Vali Nasr, "National Identities and the India-Pakistan Conflict," in *The India-Pakistan Conflict: An Enduring Rivalry*, ed. T. V. Paul (New York: Cambridge University Press, 2005), 193.

[20] Parshotam Mehra, *Essays in Frontier History: India, China, and the Disputed Border* (New York: Oxford University Press, 2007), 180.

the line of actual control.[21] India has never relaxed its vigilance against China since this war in 1962.

Border disputes between India and China significantly contribute to the tumultuous relationship between these two countries. The frontier between these two giants in Asia is the only border China has yet to determine. None of the repeated talks and negotiations have conclusively set a clear boundary between India and China. The two great powers went through several conferences and negotiations about border issues from 1981 to 1987. Bilateral boundary experts held many Joint Working Group meetings from 1988 to 2002. The leader of each side wanted to delimit the boundary and even went to visit the other state personally several times. Although numerous attempts were made by both sides of the border issue, it remains a puzzle and an endless argument. Therefore, border violations, border aggression, and illegal LOC crossings are emerging endlessly.

Two different religious ideologies and national identities between India and Pakistan have made conflicts not just intractable, but also persistent. The different religious groups had already been diffused all over the country before the partition. However, the withdrawal of the British made the differences of religion, language, and lifestyle become the decisive factors in the Indo-Pakistani partition.[22] Hitherto, these two opposing ideologies and identities still have deeply influenced them. Notably, the basic religious principles are different between the Hindus on the Indian side and the Muslims on Pakistan's side. Hindus live under a caste system, but Muslims believe that every man is equal; Hindus argue that there are multiple gods, but Muslims believe that there is only one God. Therefore, the foundations of these two states conflict with each other, and the differences seem unchangeable. Moreover, ancient history, religious habits, and ethnic origins are other factors of identity that contribute to the enduring conflicts as well. Once the violence of the partition was launched, it became very difficult to overcome the hatred that already existed between Hindus and Muslims.

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[21] Mehra, *Essays in Frontier History*, 180–81, 187.

[22] Nasr, "National Identities and the India-Pakistan Conflict," 181.

Pakistan is dissatisfied about what it considers an unfair allotment of territory and weapons, and this uneven distribution also leads to a power asymmetry between India and Pakistan. Pakistan is not just disappointed; as Liaquat's speech suggests, "Our people have gone mad."[23] The irritated population motivated and supported the military leader to run the government. Pakistan, the weaker state, is ruled by militarily-oriented decision-makers who have a tendency to put security issues at the center of their policies and use the armed forces to solve disputes instead of other diplomatic and peaceful approaches. Additionally, most of the policy-makers in Pakistan have believed that territory, institution, physical assets, and resources should have equal distribution since the independence of India and Pakistan in 1947. Mohammed Ali Jinnah, the founder of Pakistan, said that the Pakistani people are disappointed in the result of the partition and see it as "an unjust, incomprehensible and even perverse award."[24] The Pakistani population thinks that violence would pay back the insults.

Power asymmetry has made Indo-Pakistani relations contribute to enduring conflicts. The weaker state has made a strategy of using non-state actors to continually launch conflicts or start crises. For Pakistan, its non-state actors include trained Mujahids and specialized terrorism that could undermine the foundation of India's resources and power without waging a full-scale war.[25] Moreover, Pakistan has developed nuclear weapons since 1990—the "great equalizers"—that have deterred India from enlarging the war.

Unsettled territorial issues, contrasting ideologies and identities, and resource and power asymmetry are significant factors in the inevitable and enduring conflicts since the partition of 1947. The region's territorial disputes largely contribute to its instability. The dispute over Kashmir is especially significant, and various historical conflicts have been caused by this particular dispute. Additionally, incompatible religious ideologies and national identities have made the Indo-Pakistani rivalry the enduring struggle of two

[23] Dominique Lapierre and Larry Collins, *Freedom at Midnight* (New Delhi: Vikas, 1997), 382.

[24] Yasmin Khan, *The Great Partition: The Making of India and Pakistan* (New Haven, CT: Yale University Press, 2007), 127.

[25] Nasr, "National Identities and the India-Pakistan Conflict," 181.

conflicting foundations. Finally, uneven distribution of resources and power in the partition has caused power asymmetry and dissatisfied the population of Pakistan. Comparing poorly with India, Pakistan's territory, economy, and military capabilities make it insecure. Pakistan makes an effort to achieve parity through its nuclear arms race and non-state actor sabotage.

On and off since 1947, India has experienced many conflicts with its neighbors; however, India appears to possess sufficient military capabilities to defend against both China and Pakistan and to protect its interests in these regions. Therefore, there is no obvious reason to explain why India needs to expand its military capability.

2. Comparison of Economy, Population, and Geopolitics among India's Neighbors

Economy, population, territory, and coastline are key features of a state that show *latent power*.[26] These variables closely relate to a state's military expansion, as John J. Mearsheimer states in *The Tragedy of Great Power Politics*: "abundant wealth and a large population are prerequisites for building formidable military forces."[27] As shown in Table 1, comparing the economy, population, and geopolitics among India and its neighbors demonstrates at least three significant factors. First, India's economy, population, territory, and length of coastline make Pakistan insecure. Second, comparing India to China and factoring in its geopolitical condition, India has the potential to become a hegemonic power. Third, although India has good geopolitical prerequisites to become Asia's hegemon, India still cannot compare to China. Table 1 illustrates that China has the absolute advantages over India, and China's economic and natural superiority would seem to cause India insecurity. This danger might explain why India wants to expand its military capabilities. These are all possible variables that India might take into account when modernizing its military.

A strong state needs a big economy to support its military, to provide political goods, and to gain more capital from investment. China and India have two of the fastest

[26] John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: W.W. Norton & Company, 2014), 55.

[27] Ibid., 56.

growing economies in the world. China is now the world's second largest economy. According to Gurcharan Das' analysis, China will surpass the United States and become the largest economy in the near future.[28] Therefore, to compete, India must grow substantially to equal or overtake China as an economic power. According to a *Hindustan Times* report on January 16, 2014, Indian Prime Minister Narendra Modi promised that economic growth would be his key element of government policy.[29] Comparatively, Table 1 shows that Pakistan's economy is inferior to those of India and China. Pakistan's weak economy cannot afford conventional military expansion to compete with India. India's military superiority has contributed to Pakistan's sense of insecurity since the partition of 1947.[30] Additionally, Table 1 demonstrates that, as previously stated, India needs to continually spur its economic growth to catch up with and to compete with China.

Notwithstanding the risks of abnormal demographics such as those of China, high population states generally have the advantages of economic growth and therefore, larger militaries. Compared to Pakistan's population, those of China and India are the largest and second largest states in the world, and their large populations can provide a bigger military force and labor force. Furthermore, Pakistan's population is only about 15 percent of India's population; that is one of the reasons Pakistan is less competitive than India.

Bigger territory means that a state could deploy its military power more widely, collect more tax, and explore more natural resources. Territorial dispute is the reason why India had conflicts with China and Pakistan and also the reason for some historical wars. Nowadays, India still has had territorial disputes with its neighbors such as Kashmir. Pakistan's territory is smaller than India's, but China is nearly three times larger than India. China is India's biggest hostile neighbor.

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[28] Gurcharan Das, "The India Model," *Foreign Affairs* 85, no. 4 (July/August 2006): 2.

[29] "Modi Blames UPA's 'Socialist Priorities' for Economic Gloom," *Hindustan Times*, January 16, 2014, http://www.hindustantimes.com/india-news/allaboutnarendramodi/modi-blames-upa-s-socialist-priorities-for-economic-gloom/article1-1173365.aspx.

[30] Khan, The Great Partition, 127.

Table 1. Comparison and Ranking of the Economy, Population, and Geopolitical Variables among India, China, and Pakistan[31]

State / Variable	India	China	Pakistan
Economy/GDP of 2013(trillion)	1.877**(10th)**	9.240 **(2nd)** **(467.4% of India)**	0.232**(44th)** **(12.4% of India)**
Population	1,210,193,444**(2nd)**	1,350,695,000**(1st)** **(111.5% of India)**	186,693,906**(6th)** **(15.4% of India)**
Territory(km^2)	3,287,590**(7th)**	9,596,961**(4th)** **(291.9% of India)**	796,095**(36th)** **(23.4% of India)**
Length of the coastline(km)	7,516**(18th)**	14,500**(10th)** **(192.9% of India)**	1,046**(74th)** **(13.9% of India)**

A long coastline is a significant element of a forceful Navy. A robust Navy is a symbol of hegemony because a state's control of the ocean means it controls the world at the same time, and the United States is a very good example that uses a powerful Navy to bring its influence into each corner of the world. India's location right in the middle of the upper Indian Ocean area provides India a good chance to dominate the Indian Ocean and ever further. On the contrary, compared to India, Pakistan lacks a long coastline to provide enough naval bases to support a strong Navy. However, China's coastline is nearly twice as long as that of India and can use that advantage to deploy more naval power.

According to a comparison of geopolitical variables, India has the latent ability to become a military power. Enormous mountains and a far distance of border area between China and India challenge China's power projection to potentially threaten India. However, China is still India's major concern, and Pakistan also cannot be ignored because of its nuclear weapons. Actually, India's neighbors are not only China and Pakistan, but also Afghanistan, Bangladesh, Nepal, Burma, Myanmar, Sri Lanka, and Bhutan. However, by comparing the economy, population, territory, and coastline of the

31 GDP (Current US$), *The World Bank*, http://data.worldbank.org/indicator/NY.GDP.MKTP.CD/countries?order=wbapi_data_value_2013+wbapi_data_value+wbapi_data_value-last&sort=desc. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. Wikipedia, s.v. "India," last modified May 20, 2015, http://en.wikipedia.org/wiki/India; Wikipedia, s.v. "China," last modified May 20, 2015, http://en.wikipedia.org/wiki/China; Wikipedia, s.v. "Pakistan," last modified May 22, 2015, http://en.wikipedia.org/wiki/Pakistan.

former states, the latter states are too small to be threatening. Furthermore, those states are not only small but also failed. For example, five of India's neighbors— Afghanistan, Pakistan, Bangladesh, Burma, and Sri Lanka—are put into the list of failed states in *Foreign Policy* magazine's 2010 index.[32] Overall, except for China and Pakistan, the rest of India's neighbors are not a big concern. As a result, this paper uses China and Pakistan to evaluate the reason why India is so eager to expand its military.

D. METHODOLOGY

To answer the overarching research question of India's military expansion, a sub-question must be addressed: What is military expansion? In this thesis, military expansion means that a state upgrades either the quantity or performance of its military personnel or equipment in any of its service branches instead of conquering another state to expand its territory. Additionally, military expenditure and weapons possession alone do not equate to military expansion. That is to say, weapons possession is only one aspect of military expansion, and the reasons for owning a specific weapon cannot explain military expansion as a whole; an individual state may have a unique motivation for owning a specific military weapon.

This thesis borrows Sagan's three models—security model, norms model, and domestic-politics model—to address the research question of why India is expanding its military capability. Sagan's three models provide an explanation for why a state develops nuclear bombs, and these three models are broad enough to explain a state's decision to expand its conventional military power as well. The security model suggests that international threats exist in the anarchic international system and motivate a state's military expansion to provide robust national security. The norms model suggests that international prestige and national identity motivate a state, while the domestic-politics model suggests that bureaucratic politics and parochial interests actually motivate military expansion. This thesis further introduces Sagan's three models in the literature review, and then explains these three models in depth in Chapter II.

[32] Walter C. Ladwig III, "India and Military Power Projection: Will the Land of Gandhi Become a Conventional Great Power?" *Asian Survey* 50, no. 6 (November/December 2010): 1169.

India's military expansion is analyzed using two case studies to determine which model is the most applicable. I selected the case study approach for two reasons.[33] First, the case study is a better way to test this thesis' expansion theory because it pinpoints decisive evidence.[34] Another reason is that the case study can explain the causal relationship between independent and dependent variables more effectively than other methods.[35] In other words, case studies can analyze the chronological progression of historical events and explain the reasons why India has expanded its military so far.

Each case will compare India's military expansion and timeline of empirical events with those of its regional neighbors, China and Pakistan, to show that India is continuing to expand its military power despite already being one of the great powers. That is to say, case studies offer explanations for India's military expansion by comparing a timeline of Indian policymakers' decisions with those of other states' leaders and by focusing on India's conflicts, economic growth, and political factors in the context of other states.

The first case study uses India's nuclear weapons, which are the most powerful and the most symbolic. If India's nuclear expansion was motivated by the security model, we would expect India to use nuclear expansion to deter China and Pakistan from launching full-scale nuclear war and to punish any adversaries that first use nuclear weapons. Additionally, if the security model motivated India's expansion, India would continue establishing a bigger nuclear arsenal until it gained relative power and challenged Asia's nuclear hegemon—China. If India expands its nuclear power based on the norms model, India would develop nuclear weapons to earn international prestige and national identity from its nuclear expansion. Additionally, if the norms model is correct, India would continually increase the number of nuclear weapons to symbolize nuclear power. If India expands its nuclear power according to the domestic-politics model, Indian politicians might gain a reputation and support from the domestic electorate.

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[33] Stephen Van Evera, *Guide to Methods for Students of Political Science* (Ithaca, NY: Cornell University Press, 1997), 55.

[34] Van Evera, *Guide to Methods for Students of Political Science*, 54.

[35] Ibid.

Additionally, defense and scientific organizations might drive nuclearization due to the great benefits that would be afforded to them.

The second case study uses aircraft carriers to demonstrate which model best explains India's conventional weapon expansion. If India expanded its sea power based on the security model, India would be defending against its regional threats by using aircraft carriers to provide robust deterrence and sea control of the Indian Ocean. Additionally, if the security model is correct, then India would maintain or slightly increase the military share of GDP to greatly quicken the pace of building more aircraft carriers to confront China's rising maritime power and to maintain a regional maritime hegemon with relative power and substantial sea power that could protect its regional interests, such as foreign trade and energy. If the norms model is correct, India would build more aircraft carriers to symbolize a great sea power and shape its national identity.[36] If India's decision-making was motivated by the domestic-politics model, Indian officials might believe that purchasing or constructing aircraft carriers could earn more public support and benefit the indigenous industry. In other words, military-related industries, naval senior officers, and politicians would drive India's naval modernization. In the case study chapter, this thesis uses empirical evidence to analyze which model is the best explanation.

[36] "Total Aircraft Carrier Strength by Country," Global Firepower, accessed May 31, 2014, http://www.globalfirepower.com/navy-aircraft-carriers.asp.

II. THREE EXPANSION MODELS

Generally, the process of military expansion depends on a state's security concerns, geographic conditions, economic backing, and domestic politics. For example, regarding security concerns, Iran is not a wealthy state and faces economic sanctions due to its weapons possession, but it still wants to pursue nuclear development because most of its neighbors are nuclear weapons holders.[37] Regarding geographic conditions, Nepal does not possess a Navy because it is a landlocked state. Regarding economics, Liechtenstein—a state in Central Europe that faces security concerns due to its relationship with Switzerland—abolished its Army due to financial problems.[38] Regarding domestic politics, India's politicians and scientists play an important role in decisions about proliferation. To clarify, security needs, geographic conditions, economic support, and domestic politics are decisive variables for a state to establish or change a military.

This thesis applies Sagan's "Three Models" of proliferation theory to explain India's overall expansion of its military power.[39] Sagan's main thesis is that three motivating factors—security, norms, and domestic politics—explain a state's nuclear expansion.[40] Sagan claims that these three models are three different explanations for why states want or do not want to own nuclear weapons.[41] His security model hold that a state's strong military is driven by security concerns and survival, and it is along the same lines as neorealist thinking, which views the real world as anarchic. Therefore, Sagan argues that a state will develop nuclear bombs because doing so makes it strong. Strong states are able to do what they want, so strength is desirable. Additionally, the norms model holds that military expansion serves as an important emblem of a great state that a

[37] Scott Peterson, "How Much is a Nuclear Program Worth? For Iran, Well Over $100 Billion," *The Christian Science Monitor*, April 3, 2013, http://www.csmonitor.com/World/Middle-East/2013/0403/How-much-is-a-nuclear-program-worth-For-Iran-well-over-100-billion.

[38] Walter S. G. Kohn, "The Sovereignty of Liechtenstein," *The American Journal of International Law* 61, no. 2 (1967): 547, http://www.jstor.org/stable/2197053.

[39] Sagan, "Why Do States Build Nuclear Weapons," 54–86.

[40] Ibid., 54.

[41] Ibid., 55.

powerful country will pursue and prioritize. Sagan's norms model claims that a state is motivated to have nuclear weapons because these weapons can enhance its international status not because of security concerns or domestic factors. The domestic-politics model holds that a state pursues military expansion due to its bureaucratic politics and parochial interests. This thesis uses two case studies to test the three models and see which of them has the most explanatory power.

Sagan concludes that a state's nuclear decision was multi-causality.[42] In other words, a state's decision is a combination of all three models, which means that no single model can perfectly explain a state's decision, though all explanatory models are supportive. The answer for states' nuclear proliferation varies because it depends on different states' unique situations with other countries. Sagan argues that a state needs to consider all different consequences of a nuclear program for providing robust deterrence, protecting national security, enhancing national identity, and fulfilling domestic interests. Additionally, Sagan claims that policy makers can find contradictions among these three different models.[43] Sagan uses the United States, a country with nuclear capability, as an example to demonstrate contradiction between the models. States following a security-oriented strategy would restrain from proliferation, while a norms-oriented state would do the opposite.[44] According to Sagan's conclusion, therefore, no model is superior to another. In short, all three models should be equal.

A. THE SECURITY MODEL

In the security model, security is the primary motivator for a state to expand its military power; this motivation suggests that military expansion is viewed as a guarantee of national security. Security motivates a state to expand its military capability because a state's economic growth and survivability in the anarchic global system depend on basic security. Realistically, no powerful organization, state, or regime in the world could really force any other state to do anything. According to the neorealist theory of

[42] Sagan, "Why Do States Build Nuclear Weapons," 54.

[43] Ibid., 86.

[44] Ibid.

international relations, conflict and war are inevitable because existing global organizations like the United Nations (UN) do not have the ability to enforce policing within the international system. Additionally, Edward Hallett Carr says that "in international politics, there is no organized power charged with the task of creating harmony."[45] Therefore, Kenneth N. Waltz believes that "self-help is necessarily the principle of action in an anarchic order."[46] The whole world is anarchy. Therefore, a state has to rely on self-help to expand it military power and to protect its national security.

For example, in the Indian security perspective, China was a potential threat and motivated India to ruminate over the question of nuclear selection. Sagan says that one of the main purposes of India's "peaceful nuclear explosion" (PNE) in 1974 was to deter China; another purpose of this ambiguous nuclear standpoint was to avoid provoking another potential threat—Pakistan—for pursuing nuclear bombs as well.[47] India's fear of China is understandable, because from the time that India's confrontation began with China in 1962, it only took two years for China to develop a nuclear bomb in 1964.

India's development of aircraft carriers is another security example. India discovered that aircraft carriers were critical because the *INS Vikrant* played a significant role in the Indo-Pakistan War of 1971. Parallel with Sagan's security perspective, Bhaskar says that India needs aircraft carriers because India needs "energy security" in this era of "violent peace."[48] He argues that with the increasing importance of Persian Gulf oil, the maritime focus of global strategy has changed from a competitive military security in the Atlantic to a "free-trade and global economic inter-dependence" in the Pacific-Indian Ocean.[49] India needs aircraft carriers in the Indian Ocean to secure its energy supply and promote foreign trade.

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[45]Edward Hallett Carr, "Realism and Idealism," in *Conflict after the Cold War: Arguments on Causes of War and Peace*, ed. Richard K. Betts (Boston: Pearson, 2013), 83.

[46] Kenneth N. Waltz, *Theory of International Politics* (Long Grove, IL: Waveland Press, 2010), 111.

[47] Sagan, "Why Do States Build Nuclear Weapons," 59.

[48] C. Uday Bhaskar, "The Indian Naval Carrier Experience: A Conceptual Reappraisal," in *Maritime Aviation: Light and Medium Aircraft Carriers into the Twenty First Century*, ed. Peter Hore and Thomas J. Hirschfeld (Hull, England: Eniversity of Hull Press, 1999), 39.

[49] Ibid.

Under the ultimate goal of a state—survival—no state will tell anyone the real reasons for their behaviors. Because there is no way to be sure of the real intentions of other states, fear and self-help encourage power maximization and military expansion. The assumption of offensive realism is that a state will never learn how to self-control, and the best way to survive is to prevent other states from gaining relative power and advantages. Additionally, Morgenthau claims that a state's behavior was a result of the will to power.[50] In addition, states have the will to power because states want security. Hobbes stated that "man cannot assure the power and means to live well which he hath present, without the acquisition of more."[51] Then, Carr says that "territorial ambitions are just as likely to be the product as the cause of war."[52] A good example of this is the 1962 Sino-Indian War that was caused by a territorial dispute between China and India.

Offensive realists say that a state has the will to seek regional hegemony and to survive. Mearsheimer provides five assumptions of why great states pursue power. First, the world is anarchic, so security competition and conflict are unavoidable. Second, great states seek to own offensive military capability to destroy each other. Third, states can never be sure that another state will not attack using this offensive military power. Fourth, great powers' terminal goal is survival. Finally, great states are rational actors that understand the need to use strategy and behavior for survival.[53]

Furthermore, Mearsheimer thinks that security is never enough for a state; what a state really wants is power maximization. Furthermore, he suggests that great powers will focus on reaching four basic goals. First, great powers seek regional hegemony. Second, maximizing the world's wealth under their control is a great power's economic goal. Third, great powers establish strong air and naval forces to support robust armies in order to maximize their share of military power. Fourth, great powers' ambition is superior to

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[50] Hans Joachim Morgenthau, *Politics among Nations: The Struggle for Power and Peace.* New York: Knopf, 1972.

[51] Carr, "Realism and Idealism," 91–92.

[52] Ibid., 92.

[53] Mearsheimer, The Tragedy of *Great* Power Politics, 30–31.

their potential threats.[54] So, a state believes that the best way to survive and to prevent starting a war is by becoming stronger and being the biggest.

Expanding or maintaining a military is expensive for any state. Rich states can expand their military capabilities based on what they need for basic security without any foreign support. However, weak or poor states have two policies of military defense. They can either buy affordable or used weapons from other states to maintain basic security, or procure free weapons with a foreign state's support. Pakistan, for example, gains military equipment and nuclear weapons support from China. Additionally, Pakistan has spent over 90 percent of U.S. military aid since September 11, 2001, on aircraft and advanced weapon systems intended to fight India. Another policy for a weak state is to ally with a stronger power to receive security. For example, the Philippines' foreign and defense policies are closely related to those of the United States. The Philippines' internal and external security greatly relies on security agreements with the United States.[55] Iceland is another example that has a small population and no standing armed forces, but a lightly-armed Coast Guard is in charge of its defenses. Iceland is a member of NATO, and Iceland's security heavily relies on the United States. If the security model is the main reason that a state expands its military capability, then the case studies should illustrate that security concerns caused a state to take actions against potential threats.

B. THE NORMS MODEL

The norms model suggests that a state wants to expand its military power because it would like to catch up with the standards of the great military powers. That is to say, states will pursue or expand certain weapons because that expansion symbolizes great power. In the norms model, symbolic function is the main driver of nuclear proliferation. For example, France established nuclear arsenals primarily based on the symbols of *grandeur* and *independence*, instead of on security concerns.[56] France does not have an

[54] Mearsheimer, The Tragedy of *Great* Power Politics, 140–45.

[55] Ramon Magsaysay, "Roots of Philippine Policy," *Foreign Affairs* 35, no. 1, (October 1956), 29–36.

[56] Sagan, "Why Do States Build Nuclear Weapons," 79.

obvious national security threat; therefore, the norms model is a strong explanation for France to maintain nuclear arsenals. As McGeorge Bundy states, the nuclear bombs were "[de Gaulle's] passport to international grandeur. It would place France back where she belonged, among the Great Powers."[57] Bundy argues that prestige is the primary reason why France wants to keep nuclear weapons. If Bundy is correct, then states will attempt to expand their military capability even when security and domestic-politics are not motivating factors.

Additionally, in "Why Do States Build Nuclear Weapons?," Sagan uses flags, airlines, and Olympic teams as examples to demonstrate how strong, legitimate, and modern states normally enhance their international prestige.[58] These symbols demonstrate how a great state can increase prestige by expanding different kinds of power. In *The Tragedy of Great Power Politics*, John J. Mearsheimer says that "power is 'the currency' of great-power politics, and states compete for it among themselves. What money is to economics, power is to international relations."[59] In essence, some states' policymakers believe that certain equipment or weapons are needed to define their role in the world. With respect to the norms perspective, Bhaskar believes that carriers can be a symbol of a powerful state to enhance national prestige and identity.[60] That is to say, India can uproot the image of a weak, postcolonial state by possessing aircraft carriers. Therefore, some states see military expansion as necessary to meet their national destinies. Although military expansion is expensive, policymakers believe it can "both shap[e] and reflect … a state's identity."[61] For example, space exploration programs and military satellite launches are not affordable for most small and poor states, nor are they of security concern. However, space programs and military satellites are markers of states that exhibit advanced technologies.

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[57] Joseph Cirincione, *Bomb Scare: The History and Future of Nuclear Weapons* (New York: Columbia University Press, 2007), 60.

[58] Sagan, "Why Do States Build Nuclear Weapons," 75.

[59] Mearsheimer, *The Tragedy of Great Power Politics*, 12.

[60] Bhaskar, "The Indian Naval Carrier Experience," 36.

[61] Sagan, "Why Do States Build Nuclear Weapons," 73.

C. THE DOMESTIC-POLITICS MODEL

The domestic-politics model differs from the security and norms model. The domestic-politics model suggests that domestic factors primarily motivate or demotivate a state to expand its military capability. That is to say, this model suggests that bureaucratic or political interests within the state encourage or discourage its military expansion. According to Sagan's domestic-politics model, domestic factors include the state's military-related industries or laboratories, the armed forces, and politicians.[62] A state is likely to expand its military capability when individuals from all three sectors share the same viewpoints and work together throughout the process of decision-making.

For example, Sagan argues that the domestic-politics model is a persuasive explanation for India's nuclear expansion because of three aspects. First, Prime Minister Gandhi made the decision for the PNE in a small group that only included few advisers and scientists instead of defense and foreign officials. Second, New Delhi made its decision in a rush without making long-term security considerations. Third, Prime Minister Gandhli understood that she could use a PNE to increase her low domestic support in early 1974. Although the domestic politics model provides powerful evidence than the security model, the domestic politics model alone is inadequate to correctly explain India's nuclear case.

The domestic-politics model is founded upon the bottom-up logic that industrial-scientific-military factors motivate politicians or policymakers to make a decision regarding military expansion.[63] Once domestic industries have the capability to establish military-related weapons or platforms, and once state-run laboratories have the techniques to develop advanced weapons, entrepreneurs and scientists will encourage governments to take action to increase the flow of income and prestige in these industries and laboratories. Additionally, each service branch of the military possesses its own specific responsibilities, and these responsibilities or roles will generate bureaucratic interests that are partial to particular weapons. Besides, politicians could use military

[62] Sagan, "Why Do States Build Nuclear Weapons," 64.

[63] Ibid.

expansion to increase job opportunities and thus enhance the morale of the public, leading to increase popular support. If the domestic-politics model is the most significant, then domestic actors should support military expansion even if there is a negative effect on the future of both security and norms. In other words, the security and norms models would not motivate a state's military expansion without domestic support.

III. INDIA'S MILITARY EXPANSION—CASE STUDIES

This thesis uses India's two case studies—nuclear weapons and aircraft carriers—to determine which model of military expansion theory best explains India's continued expansion. According to the GFP's report, India is the fourth largest military power in the world and is still expanding its military power at a fast pace.[64] On the one hand, India might want use its ambition to stay ahead of China, indeed to provide national security to its citizens. According to the neo-realist viewpoint, states believe that being the biggest power is the key to survival. On the other hand, policymakers of India might just want to use military expansion to enhance national prestige or to earn more public support. India's economic growth has slowed since 2010, but the growth of its military spending and military weapon importation never slowed.[65] In fact, as shown in Table 2, India's defense budget increases year by year. The continuing growth of India's defense budget will attract other states' attention, especially when there is a high growth rate in select budget years. For example, according to the *India Strategic Report*, India's defense budget increased 17.92 percent in 2004–2005, 10 percent in 2008–2009, 34.19 percent in 2009–2010, 11.59 percent in 2011–2012, 17.63 percent in 2012–2013, and 10 percent in 2014–2015.[66] The budget was expanded for military modernization and paid for huge personnel costs. In addition, India has been the biggest military weapons importer in the world since 2010.[67] India is not only the largest but also, purchases twice the weapons as the second and third biggest buyers—China and Pakistan.

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64 "India Military Strength," GFP, accessed May 27, 2014, http://www.globalfirepower.com/country-military-strength-detail.asp?country_id=india.

65 Cohen and Dasgupta, *Arming without Aiming*, xi.

66 Amit Cowshish, "India's Defence Budget 2013–14," India Strategic, March 2013, http://www.indiastrategic.in/topstories1929_India_Defence_Budget_2013_2014.htm.

67 Gardiner Harris, "World's Biggest Arms Importer," *The New York Times*, March 6, 2014, http://www.nytimes.com/2014/03/07/business/international/worlds-biggest-arms-importer-india-wants-to-buy-local.html?_r=1.

Table 2. Military Expenditure among India, Pakistan, and China, 1990–2012[68]

Year/State	India	Pakistan	China
	Billions Indian Rupee	*Billions Pakistani Rupee*	*Billions Yuan Renminbi*
1990	188(3.2)	58.6(5.8)	[49] (2.5)
1991	199(3.0)	70.2(5.8)	[53.3] (2.4)
1992	213(2.8)	81.6(6.1)	[68.9] (2.5)
1993	265(2.9)	89.6(5.7)	[73.2] (2.0)
1994	283(2.8)	98.1(5.3)	[86.9] (1.7)
1995	327(2.7)	112(5.3)	[105] (1.7)
1996	359(2.6)	124(5.1)	[125] (1.7)
1997	435(2.7)	132(4.9)	[135] (1.6)
1998	511(2.8)	140(4.8)	[150] (1.7)
1999	627(3.1)	147(3.8)	[170] (1.9)
2000	647(3.1)	154(3.7)	[184] (1.9)
2001	703(3.0)	170(3.8)	[227] (2.1)
2002	722(2.9)	188(3.9)	[262] (2.2)
2003	774(2.8)	207(3.7)	[288] (2.1)
2004	965(2.8)	232(3.6)	[331] (2.1)
2005	1035(2.8)	263(3.4)	[379] (2.1)
2006	1102(2.5)	287(3.3)	[452] (2.1)
2007	1190(2.3)	310(3.0)	[546] (2.1)
2008	1518(2.6)	351(2.8)	[638] (2.0)
2009	1993(2.9)	412(2.8)	[764] (2.2)
2010	2146(2.7)	482(2.6)	[836] (2.1)
2011	2373(2.6)	[565] ([2.7])	[944] (2.0)
2012	2495(2.5)	628(2.7)	[1049] (2.0)

[68]"Military Expenditure Database," Stockholm International Peace Research Project, accessed August 25, 2014, http://portal.sipri.org/publications/pages/expenditures/country-search. [] = SIPRI estimate; () = share of GDP.

A. NUCLEAR EXPANSION

This section focuses on India's nuclear development from the partition to the present. Table 3 demonstrates that India, China, and Pakistan continue to expand their nuclear arsenals. This thesis uses three military expansion models to analyze India's nuclear case to determine which model is the most powerful explanation.

1. Security Model

India's nuclear weapon expansion is based on the security model because of its historical conflicts and nuclear weapons neighbors—China and Pakistan. This section is broken into two portions to explain India's case. The first summarizes India's three periods of nuclear development since the partition of 1947 demonstrated that India's expansion has been motivated by security concerns. Secondly, this section ends by examining how China and Pakistan's three nuclear behaviors influence India's.

As shown in Tables 3 and 4, India's nuclear weapons development process since partition can be divided into three periods: none (before 1989), opaque (1990–1998), and overt (after 1999). The first period of India's nuclear development was primarily motivated by China's security threats. India's early days of founding through 1989 illustrate the precursors that led to its nuclear expansion. China seems to be the biggest security concern for India because all of its geopolitical variables—economy, population, territory, and length of coastline—are more advanced than India's. Moreover, since the Sino-Indian War of 1962, India has known that China is another big security challenge. After the war, India has expanded its military to keep pace with China. In 1964, immediately following the Sino-Indian War, China began to develop nuclear weapons and to test nuclear bombs.[69] The timing of China's nuclear weapons testing was sensitive; the country wanted to enhance its deterrence and to target India. After nearly a decade, India began testing its nuclear weapons and refused to sign the NPT.

[69] Sagan, "Why Do States Build Nuclear Weapons," 59.

Table 3. Nuclear Weapons Inventories, 1964–2014[70]

Year	India	Pakistan	China
1964			1
.			.
.			.
1984			**249**
1985			**243**
1986			**230**
1987			**230**
1988			**240**
1989			**238**
1990			**232**
1991			**234**
1992			**234**
1993			**234**
1994			**234**
1995			**234**
1996			**234**
1997			**232**
1998	**2**	**3**	**232**
1999	**8**	**8**	**232**
2000	**14**	**13**	**232**
2001	**20**	**18**	**235**
2002	**26**	**23**	**235**
2003	**32**	**28**	**235**
2004	**38**	**33**	**235**
2005	**44**	**38**	**235**
2006	**50**	**43**	**235**
2007	**60**	**50**	**235**
2008	**70**	**60**	**235**
2009	**80**	**70**	**240**
2010	**80**	**70**	**240**
2011	**80-100**	**90-110**	**240**
2012	**80-100**	**90-110**	**240**
2013	**90-110**	**100-120**	**250**
2014	**110**	**120**	**250**

[70] Norrus, Robert, and Kristensen, Hans M. "Global Nuclear Weapons Inventories, 1945–2010." *Bulletin of the Atomic Scientists* 66, vol. 4 (May 2013): 77–83. doi: 10.2968/066004008; "World Nuclear Stockpile Report," Ploughshares Fund, last modified August 28, 2014, http://www.ploughshares.org/world-nuclear-stockpile-report; Shannon Kile et al., "World Nuclear Forces," in *SIPRI Yearbook 2013*, ed. Stockholm International Peace Research Institute (New York: Oxford University Press, 2013)., http://www.sipri.org/yearbook/2013; Shannon Kile et al., "World Nuclear Forces," in *SIPRI Yearbook 2012*, ed. Stockholm International Peace Research Institute (New York: Oxford University Press, 2012)., http://www.sipri.org/yearbook/2012; Shannon Kile et al., "World Nuclear Forces," in *SIPRI Yearbook 2011*, ed. Stockholm International Peace Research Institute (New York: Oxford University Press, 2011)., http://www.sipri.org/yearbook/2011

Table 4. The Conflicts between India and Pakistan[71]

Year	Dispute Months	Initiator	Hostility level	Nuclear level
1972	1	Pakistan	Use of force	No nuclear capability
1973			No Militarized action	No nuclear capability
1974			No Militarized action	No nuclear capability
1975			No Militarized action	No nuclear capability
1976			No Militarized action	No nuclear capability
1977			No Militarized action	No nuclear capability
1978			No Militarized action	No nuclear capability
1979			No Militarized action	No nuclear capability
1980			No Militarized action	No nuclear capability
1981	5	Pakistan	Use of force	No nuclear capability
1982	1	India	Display of force	No nuclear capability
1983	3	Pakistan	Use of force	No nuclear capability
1984	1	Pakistan	Use of force	No nuclear capability
1984	3	Pakistan	Use of force	No nuclear capability
1985	10	Pakistan	Use of force	No nuclear capability
1986	1	India	Use of force	No nuclear capability
1986	2	India	Display of force	No nuclear capability
1987	3	India	Display of force	No nuclear capability
1988			No Militarized action	No nuclear capability
1989			No Militarized action	No nuclear capability
1990	11	India	Use of force	De facto nuclear capability
1991	5	India	Use of force	De facto nuclear capability
1992			No Militarized action	De facto nuclear capability
1993	4	Pakistan	Use of force	De facto nuclear capability
1994	12	Pakistan	Use of force	De facto nuclear capability
1995	12	Pakistan	Use of force	De facto nuclear capability
1996	12	Pakistan	Use of force	De facto nuclear capability
1997	12	Pakistan	Use of force	De facto nuclear capability
1998	12	Pakistan	Use of force	De facto nuclear capability
1999	4	Pakistan	Use of force	Overt nuclear capability
1999	3	Pakistan	Use of force	Overt nuclear capability
1999	5	India	War	Overt nuclear capability
2000	10	India	Use of force	Overt nuclear capability
2001	5	Pakistan	Use of force	Overt nuclear capability
2001	1	India	Use of force	Overt nuclear capability
2002	10	India	Use of force	Overt nuclear capability
2003			No Militarized action	Overt nuclear capability
2004			No Militarized action	Overt nuclear capability
2005			No Militarized action	Overt nuclear capability
2006			No Militarized action	Overt nuclear capability
2007			No Militarized action	Overt nuclear capability
2008	2	Pakistan	No Militarized action	Overt nuclear capability
2009			No Militarized action	Overt nuclear capability
2010	1		No Militarized action	Overt nuclear capability
2011	1	India	Display of force	Overt nuclear capability
2012			No Militarized action	Overt nuclear capability
2013	9	India	Display of force	Overt nuclear capability
2014	1	India	No Militarized action	Overt nuclear capability

[71] S. Paul Kapur, *Dangerous Deterrent: Nuclear Weapons Proliferation and Conflict in South Asia* (Stanford, CA: Stanford University Press, 2007), table I; Asad Hashim, "Timeline: India-Pakistan Relations," *Al Jazeera, May 27, 2014*, http://www.aljazeera.com/indepth/spotlight/kashmirtheforgottenconflict/2011/06/20116151130582241 15.html.

Along the same line, in *Dangerous Deterrent*, S. Paul Kapur states that a series of security issues led India to change its nuclear policy due to its fear and desire for survival. Although India has refused to join the nuclear non-proliferation community since 1970, India's Prime Minister, Jawaharlal Nehru, had previously publicly rejected the development of nuclear weapons.[72] Historical events demonstrate why India started to rethink its anti-nuclear policy. For example, India lost the 1962 Sino-Indian War, and China tested its nuclear weapons in 1964. Therefore, India began to reconsider its need for a nuclear program and refused to sign the NPT in order to deter a growing China. Accordingly, historical events suggest that security drove India's initial period of nuclear weapons possession.

The vicious circle of nuclear proliferation in South Asia pushed India forward in its nuclear decision. China's nuclear expansion motivated India's nuclear program, and then India's expansion of military capabilities motivated Pakistan's nuclear development. After Pakistan lost the Indo-Pakistan War of 1971, Prime Minister Zulfikar Ali Bhutto collected renowned atomic scientists in Multan to ask them to develop nuclear bombs in January 1972. Bhutto seriously reported that "we are fighting a thousand year war with India, and we will make an atomic bomb even if we have to eat grass."[73] This period of India's nuclear development started with its decision to build the Bhabha Atomic Research Center (BARC). At 8:05 a.m. on May 18, 1974, India successfully conducted its first nuclear device demonstration, and India called this explosion the "Smiling Buddha" or "peaceful" nuclear explosion.[74] India used the 1974 explosion to prove its nuclear capability and ambiguous nuclear posture. However, the so-called "peaceful" nuclear explosions were not peaceful for other states around the world.

The Brasstacks Crisis of 1986 was a turning point between the first and second periods of nuclear development. This crisis sped up the process of India's nuclear

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[72] S. Paul Kapur, *Dangerous Deterrent: Nuclear Weapons Proliferation and Conflict in South Asia* (Stanford, CA: Stanford University Press, 2007), 4.

[73] T.V. Paul, *The Warrior State: Pakistan in the Contemporary World* (New York: Oxford University Press, 2014), 94.

[74] "Cold War: A Brief History, The 'Peaceful' Explosion," Atomic Archive, accessed May 27, 2014, http://www.atomicarchive.com/History/coldwar/page17.shtml.

expansion due to the high degree of hostility and corresponding sense of insecurity. India's second period of development, which is referred to here as an opaque period, began once India's nuclear capability was fully matured but not confirmed by testing. On one side, India's policy makers thought that they did not have to warn Pakistan before conducting Operation Brasstacks at the Indo-Pakistani border area because it was a routine exercise. On the other side, Pakistan's leaders saw this exercise as showing off India's conventional superiority and taking the opportunity to invade Pakistani territory, and then Pakistan held an "offensive and provocative" reaction in response.[75] India's officials analyzed the Brasstacks Crisis and believed that "Pakistan would never cease its hostility towards India as this emanated from the inner logic of its very existence; thus, Pakistan's anti-India policies were not temporary or tactical."[76] Most importantly, Pakistan became a de facto nuclear weapon state after the Brasstacks Crisis, and India was rethinking the significance of the nuclear war-fight capabilities.[77] Accordingly, the Brasstacks Crisis has greatly contributed to both India and Pakistan's decision to assemble atomic bombs because of security concerns.

India's third period of nuclear development—overt nuclear expansion—was and is still motivated by its security threats, especially China, and its nuclear test in 1998 proved that its nuclear capability was fully developed. With the end of the Cold War in 1991, the security umbrella provided by the former Soviet Union was no longer available to protect India. In other words, India lost one strong ally to confront the threat of China because the security agreements of the Indo-Soviet Treaty in 1971 were not relevant once the Soviet Union had collapsed.[78] Thus, fear of the growing Chinese military capabilities quickened India's pace of developing nuclear capabilities and motivated the nuclear test of 1998. For example, Pravin Sawhney in his article cites Defense Minister George Fernandes' report, which distinguishes "China as [India's] potential threat Number

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[75] Devin Hagerty, *The Consequences of Nuclear Proliferation: Lessons from South Asia* (Cambridge, MA: MIT Press, 1998), 101.

[76] Ibid., 106.

[77] Ibid., 127.

[78] Sumit Ganguly, "The Road to Pakhoran II: The Prospects and Sources of New Delhi's Nuclear Weapons Program," *International Security* 23, no. 4 (Spring 1999), 167.

One."[79] Furthermore, the Prime Minister of India, A. B. Vajpayee, sent a letter to the president of the United States, Bill Clinton, and explained "China is the main reason for conducting nuclear test."[80] In other words, India's fear of China's nuclear power motivated India to develop nuclear bombs. To make matters worse, Pakistan subsequently sped up its weapon program through China's support. Today, India's current number of nuclear warheads—around 90 to 110—is close to the number of Pakistan's.[81] Nevertheless, India's nuclear development has been gradual and has followed China's and Pakistan's pace. For a poor country like Pakistan, the nuclear warhead has been a relatively affordable weapon. As Sagan says, the nuclear weapon provides "robust and affordable security."[82] India does manufacture similar quantities of nuclear weapons to keep pace with Pakistan.

India can use nuclear expansion to deter China and Pakistan from launching full-scale nuclear war and punish any malicious adversaries that use nuclear weapons first. That is to say, India's nuclear weapon expansion is based on the security concern that is a result of China's and Pakistan's nuclear behavior. The nuclear weapons behaviors of Pakistan and China instigate India's fear and influence its nuclear expansion in three ways.

First, because China and Pakistan have not reduced their nuclear arsenals, India has followed suit.[83] According to Table 3, Nuclear Weapons Inventories 1964–2014, China has possessed nuclear weapons since 1964, and China's nuclear arsenals reached its first peak in 1984. Since then, China had showed a small trend of disarmament of nuclear weapons since its number (249) of nuclear weapons reached its highest point in 1984. However, when India overtly owned nuclear capability, China has reversed its

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[79] Pravin Sawhney, *The Defence Makeover: 10 Myths that Shape India's Image* (New Delhi, India: Sage, 2001), 20.

[80] Sawhney, *The Defence Makeover*, 20.

[81] Shannon N. Kile and Hans M. Kristensen, "World Nuclear Forces," in *SIPRI Yearbook 2013*, ed. Stockholm International Peace Research Institute (Oxford, England: Oxford University Press, 2013), http://www.sipri.org/yearbook/2013/06.

[82] Sagan, "Why Do States Build Nuclear Weapons," 59.

[83] Kile and Schell, "Military Spending and Armaments: Nuclear Forces."

trend from a decrease to an increase of its nuclear arsenals since 2000—just one year after both India and Pakistan possessed overt nuclear capability. At the same time, India also rapidly increased its nuclear warheads from 14 to 110, which is nearly a 700 percent expansion.[84] Simultaneously, Pakistan has speedily increased its nuclear warheads from 13 to 120, which is in excess of an 800 percent expansion.[85] Therefore, India uses nuclear expansion to address its insecurity from its geographic location. India is sandwiched between two adversaries—China and Pakistan—that own nuclear warheads, and these states have experienced numerous conflicts. On one side, China remains reluctant to share how many nuclear warheads it actually owns. On the other side, Pakistan wants to produce more nuclear warheads than India and receives assistance in nuclear manufacturing from China.

Second, since Pakistan was unwilling to sign the NPT, India pulled out of the NPT. Initially, India had been advocating for an anti-nuclear policy. India's anti-nuclear and pro-nuclear supporters had been debating this issue for more than 20 years. However, India has excluded itself from membership of the NPT. Indian officials claim that conventional superiority will not defeat a nuclear-strong Pakistan within a world that requires self-help to survive.

Third, Pakistan's policy of nuclear weapons usage has forced India to expand its nuclear weapons as well. India's Prime Minister Narendra Modi still holds a no-first-use nuclear weapons doctrine.[86] However, Pakistan does not have the same policy. Essentially, India and most states know that nuclear weapons will cause chaos and disaster. India will probably not be the first to use a nuclear weapon to threaten or launch a war based on its no-first-use policy, but India needs nuclear expansion to provide deterrence and to protect its national security. Pakistan does hold a first-use doctrine, so it would strike India with nuclear bombs. Therefore, India requires nuclear weapons and

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[84] Robert S. Norris and William M. Arkin, "Appendix 8A: Tables of Nuclear Forces," in *SIPRI Yearbook 2000*, ed. Stockholm International Peace Research Institute (Oxford, England: Oxford University Press, 2000), http://www.sipri.org/yearbook/2000/files/SIPRIYB0008A.pdf; Kile and Kristensen, "World Nuclear Forces."

[85] Ibid.

[86] "India as a Great Power: Know Your Own Strength," *The Economist*, March 30, 2013, http://www.economist.com/node/21574458/.

robust second-strike capabilities to retaliate against a Pakistan that has such a nuclear policy.

Regarding second-strike capabilities, India continues to increase the quantity and quality of ballistic missiles to enhance its deterrence. India's deadliest ballistic missile, the Agni-5, can provide a powerful deterrent for India's national security. India first tested its two-stage Agni II intermediate-range ballistic missile (IRBM) on April 11, 1999. The test showed that the Agni II has a range of 2,000 kilometers, which can reach any city in Pakistan. Obviously, the Agni II's range is not far enough to reach the entire territory of the potential adversary—China. Therefore, India's sense of insecurity motivates its further development of the ballistic missile. India has developed the Agni-5, a three-stage missile, designed to carry a 1-ton nuclear warhead with a 5,000-kilometer range capability. The test launch was successfully conducted on September 15, 2013.[87] Most importantly, this missile can be launched on multiple platforms, such as moving vehicles and submarines, to greatly enhance India's second-strike capability to deter China's rising and Pakistan's first-use policy.

2. Norms Model

India's nuclear program and its overt nuclear capabilities attracted the attention of the global community. Nuclear bombs made India become not just a great conventional state, but also a nuclear power. India's nuclear capabilities earned the country national prestige and improved its international status—much like the five permanent members of the UN Security Council did in the early days of their nuclear development. Additionally, India might have used nuclear development to fulfill a sense of technological triumph and to be identified as a powerful state. Therefore, several reasons explain why India is one of the civilian governments that has not signed the NPT. Just like many other states in the world, India believes it will become a great power in the near future. Accordingly, most of the policy-makers of India argue that nuclear weapons can greatly enhance

[87] Pallava Bagla, "Agni-5, India's Most Potent Nuclear-Capable Ballistic Missile, Launched Successfully," *NDTV*, September 15, 2013, http://www.ndtv.com/article/india/agni-5-india-s-most-potent-nuclear-capable-ballistic-missile-launched-successfully-418800.

international prestige to allow India a stronger voice among other great states, such as China and the United States.

India's 1998 nuclear test bolstered its national confidence and uprooted the image of a weak state. Former Foreign Secretary J. N. Dixit said this test "would increase Vajpayee's credibility and infuse India with a great sense of confidence and pride."[88] In *India's Nuclear Bomb*, George Perkovich points out that the image of a nuclear test declared for the Indian people that "colonialism was dead—again," and he argues that "anticolonial motivation" is one of the drivers that presses India to conduct a nuclear program because nuclear capability symbolized India as a great state instead of weak state like most postcolonial states in the 1940s.[89] Therefore, this kind of anti-colonialism pushes India further into its nuclear program.

From the normative perspective, India also enhanced its prestige from its ballistic missiles and sea-launched nuclear capabilities. As India's economy continued to grow, it wanted to follow the path of other great powers, as the norms model depicts. For example, regarding the intermediate-range ballistic missile, India did not only develop it due to security concerns but also due to normative reasons; it wanted to show its advanced technology and robust power. Similarly, in *Why Countries Go for Ballistic Missiles*, Upendra Chaudhary argues, "nuclear and missile programs are symbols of technical prowess and scientific competence by virtue of which India can be placed alongside the world's leading developed nations."[90] That is to say, a state could become a great power by developing advanced and complicated ballistic missiles as a significant symbol.

India's intermediate-range ballistic missiles are its most powerful land-to-land weapons and can carry multiple nuclear warheads. The reason for this focus is because ballistic missiles and the civilian space-launch program are associated with each other

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[88] George Perkovich, *India's Nuclear Bomb: The Impact on Global Proliferation* (Berkeley, CA: University of California Press, 1999), 416.

[89] Ibid.

[90] Upendra Chaudhary, "Why Countries Go for Ballistic Missiles?" *Indian Defence Review*, May 14, 2012, http://www.indiandefencereview.com/news/why-countries-go-for-ballistic-missiles/.

and are a symbol of national prestige and high-tech development. Techniques of ballistic missiles and civilian space-launches are interlinked. Moreover, these programs need advanced technology and sophisticated know-how for development. According to an Arms Control Association report, there are 31 states that have developed and currently own ballistic missiles around the world.[91] Only India and six other states have ballistic missiles with a range of over 5,000 kilometers, meaning their bombs can reach any city in their region.[92] The ballistic missile is a strategic and classified weapon that requires high-level technology and considerable testing time. Therefore, the ballistic missile is a symbol of a powerful and technologically advanced state.

3. Domestic-Politics Model

The third model that reflects India's decision to pursue a nuclear program centers on the pressures coming from domestic factors. These pressures are not external drivers like security concerns or symbols of great power in an anarchic world, which are the two models examined previously. Domestic factors are internal drivers that include defense and scientific organizations and political parties; these bureaucratic and parochial interests might also drive India's nuclearization.

Three primary complexes greatly contribute to India's nuclear expansion: the atomic energy establishment, defense research and development organizations, and the space research program.[93] Itty Abraham calls these complexes "strategic enclaves" because the products they make are for strategic usage to achieve national security goals and because the facilities are "institutionally, spatially, and legally . . . distinct and different from the existing structure of the Indian military-security complex."[94] Indeed,

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[91] Kelsey Davenport, "Worldwide Ballistic Missile Inventories," Arms Control Association, January 5, 2012, https://www.armscontrol.org/factsheets/missiles#6. The 31 states that possess ballistic missiles are Afghanistan, Armenia, Bahrain, Belarus, China, Egypt, France, Georgia, Greece, India, Iran, Iraq, Israel, Kazakhstan, Libya, North Korea, Pakistan, Romania, Russia, Saudi Arabia, Slovakia, South Korea, Syria, Taiwan, Turkey, Turkmenistan, United Arab Emirates, United Kingdom, United States, Vietnam, and Yemen.

[92] Ibid.

[93] Ashley J. Tellis, *India's Emerging Nuclear Posture: Between Recessed Deterrent and Ready Arsenal* (Santa Monica, CA: RAND Corporation, 2001), 90.

[94] Itty Abraham, "India's 'Strategic Enclave': Civilian Scientists and Military Technologies," *Armed Forces & Society* 18, no. 2 (Winter 1992), 233.

these complexes need "privileged political and budgetary support" from India's policymakers to create those advanced nuclear arsenals.[95] Therefore, India's nuclearization should consider these three strategic enclaves.

Nuclear facilities with India's best equipment and most talented scientists have enabled the establishment of atomic energy. For example, India's 1974 explosion and the 1998 nuclear test both occurred at the BARC in Bombay. Tellis argues that the establishment of atomic energy will continually drive India's nuclearization in three aspects. First, it will motivate "nuclear research and development on weapon designs."[96] Second, the establishment of atomic energy will encourage India to seek opportunities to conduct nuclear tests in the future. Third, it will persistently discourage India from assenting to follow the Fissile Material Cut-Off Treaty (FMCT).[97]

India's defense research and development organizations, combined with its space research program, are the drivers that push India's nuclear bomb to a higher level. These organizations include many different kinds of defense laboratories and institutions that can develop "the specific safing, arming, fuzing, and firing (SAFF) system"[98] to make nuclear weapons more usable. Additionally, India's space program includes the most advanced technology and know-how about the development of bomb delivery systems. Tellis asserts that these complexes will drive India to develop its nuclear program in three aspects. First, they will motivate India to produce a longer delivery system that is more difficult to intercept. Second, these complexes will continue to develop India's second-strike capabilities from different platforms such as aircraft, submarines, and mobile vehicles. Third, they will motivate India to modify its nuclear arsenals.[99] Accordingly, the establishment of atomic energy, the defense research and development organizations, and the space research program are all bureaucratic factors that influence India's decision to expand its nuclear capabilities.

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[95] Tellis, *India's Emerging Nuclear Posture*, 90.

[96] Ibid., 91–94.

[97] Ibid.

[98] Ibid., 94–98.

[99] Ibid.

Politics are a key factor that affects India's nuclear weapons expansion. Generally, different political parties have different proclivities for specific military developments. However, India's nuclear expansion has continued since the country initially developed nuclear weapons. India's 1998 nuclear test provided the BJP-dominated government some domestic political benefits. Consequently, as one commentator from *The Times of India* claimed, "No government in India will go against the consensus in favor of creation of an adequate nuclear deterrent."[100] Policymakers understand that the public supports nuclear developments and that aligning with the public will enhance their popularity. Therefore, India's leaders remain in agreement on this particular issue to maintain public support, despite the fact that the political party of the prime minister and leading party have alternated after every general election since 1977.[101]

India's domestic political environment is a persuasive explanation for India's 1974 nuclear explosion and its 1998 nuclear test for two primary reasons. First, the decision-making of these two events occurred in a small group within a short period of time. India's nuclear weapons program was authorized by Indian Prime Minister Indira Gandhi on September 7, 1972. A small team consisting of 75 scientists worked on developing a nuclear bomb at the BARC. Moreover, India made the final decision on May 8, 1974, which is 10 days before the explosion.[102] Similarly, in 1998, before India's nuclear test, only "Vajpayee, Mishra, and Jaswant Singh participated in the relevant deliberations with the top scientists. Advani's and Sinha's role remain unclear. Fernandes was told only two days before the event, while the three military service chiefs and the foreign secretary were informed on May 10."[103] This small group of top decision makers hastily authorized the 1998 nuclear test within several days and without long-term strategic plans.[104] The scientists were willing to push the nuclear program because they

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[100] Tellis, *India's Emerging Nuclear Posture*, 104.

[101] "Prime Minister of India (1947–2014)," General Awareness, December 2012, http://gkrecord.blogspot.in/2012/12/list-of-indian-prime-ministers-1947-2012.html.

[102] Sagan, "Why Do States Build Nuclear Weapons," 67.

[103] George Perkovich, *India's Nuclear Bomb*, 416.

[104] Ibid.

needed to ensure that the government would continue to financially support their laboratories.

Second, for many decades, members of different political parties have understood that they can use nuclear policy to enhance their reputation and public support. Gerard Braunthal, an American researcher, conducted a public survey in India during February–March and May 1966, which was several months after the Indo-Pakistani War of 1965 and four years after the Sino-Indian War of 1962. His reports note that, "Indeed, 7 out of 10 believed India should produce her own atomic weapons."[105] Regarding the 1974 explosion, Prime Minister Gandhli used the PNE to increase her low domestic support and to assist with elections. Indeed, in June 1974, Indian public opinion polls demonstrated that 90 percent of the Indian population viewed this explosion as a great achievement.[106] Again, in 1998, BJP used nuclear policy as the theme of their campaign manifesto, ambiguously stating that they would "re-evaluate the country's nuclear policy and exercise the option to induct nuclear weapons."[107] The BJP's subsequent public support proved that Prime Minister Vajpayee's decision was right. Six major cities' public opinion polls showed that 91 percent of the population approved the 1998 nuclear test.[108] In fact, after hearing news of the nuclear test, the Indian people walked to the streets to celebrate.

4. Conclusion

Although no one single model can fully explain India's nuclear expansion, the evidence in this thesis suggests that the security model is the stronger motivation for India to possess a bomb. India cannot abandon nuclear bombs because of two security threats: Pakistan and China. First, India needs second-strike capabilities to retaliate against Pakistan's use of nuclear weapons. Pakistan has not only increased the number of its bombs, but it also has developed more advanced nuclear warheads. Clearly, Pakistan's

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[105] Ashok Kapur, *India's Nuclear Option: Atomic Diplomacy and Decision Making* (New York: Praeger, 1976), 179.

[106] Sagan, "Why Do States Build Nuclear Weapons," 67–68.

[107] Perkovich, *India's Nuclear Bomb*, 407.

[108] Ibid., 416.

nuclear bombs are aimed to deter India, and its first-use policy contributes to India's nuclear expansion. Second, and the most significant perspective, China primarily drives India's nuclear weapons program. India needs to expand nuclear capabilities to deter rising China because China's military power and numerous nuclear tests frighten India.

Undoubtedly, India's security needs have prompted the country toward nuclear expansion. India's leaders believe that nuclear weapons can protect national security and rival the threats from China and Pakistan. All three phases of India's nuclear development—none, opaque, and overt—began with security concerns. During the first phase, India's fear of a growing nuclear power, China, motivated its nuclear program. In the second phase, consequences of the Brasstacks Crisis in 1986 significantly influenced India's nuclear status. Finally, the third phase of India's development can be viewed as an attempt to make every effort to provide national security instead of relying on other super powers, such as the United States or the Soviet Union. Additionally, China and Pakistan's nuclear behaviors—expansion of nuclear arsenals, unwillingness to sign the NPT, and the first-use policy—motivated India's nuclear expansion. In other words, India's sense of insecurity stemmed from two things: its adversaries' nuclear expansion and Pakistan's use of nuclear capabilities as a shield to boldly perform its anti-India policy. India, China, and Pakistan are the only three nuclear holders that are not reducing their arsenals.[109] According to the SIPRI report, most nuclear weapons states are declining their inventories due to the fact that these weapons have the potential to cause mass destruction.

As is the case in most nuclear states, the security model provides a powerful explanation for India's expansion. However, the equation is not complete without the norms and domestic-politics models. In terms of the norms model, nuclear bombs and ballistic missiles are symbols of a powerful and technologically advanced state. Anti-colonialism pushed India further into its nuclear program and ballistic missiles, and these nuclear expansions bolstered its national confidence and uprooted the image of a weak state. Regarding domestic-politics, "Strategic enclaves" are composed of the atomic energy establishment, defense research and development organizations, and the space

[109] Kile and Schell, "Military Spending and Armaments: Nuclear Forces."

research program that greatly contribute to India's nuclear expansion. Political parties' decision-making and public support are additional domestic-politics factors for India's nuclear weapons expansion. Accordingly, the security, the norms, and the domestic-politics models should be combined to provide the best explanation for India's nuclear expansion.

However, norms and domestic-politics models cannot completely explain India's case. The norms model is unable to clarify why India's previous policymakers did not assemble nuclear bombs as soon as possible, as opposed to waiting until 1998. The timing of India's overt nuclear development does not fully support the norms model. If India's policymakers sought to pursue nuclear bombs for the sake of prestige, India could have developed atomic bombs after its first nuclear explosion of 1974 instead of waiting until after the end of the Cold War. Prime Minister Nehru publicly rejected nuclear bombs before, but he would not say if he believed in the norms model. Domestically, the issue of nuclear bombs would not sustain itself politically without external continued security concerns for India. Empirically, India already had domestic supports—nuclear technology—in hand since its first nuclear explosion; India's only question was when and whether to go forth with these weapons.

B. SEA POWER EXPANSION—AIRCRAFT CARRIERS

This section focuses on India's naval development and then uses the example of aircraft carriers to determine which model of military expansion theory best explains India's case. The Indian Navy's 2003 slogan, *Taking to the Blue Waters*, fully demonstrates its willingness to expand maritime capabilities.[110] This thesis employs three models—the security, norms, and domestic-politics models—to analyze why a state expands its sea power. Table 5 demonstrates that the Indian Navy is expanding in quality more than size in its three main types of naval platforms—surface combatants (aircraft carriers, destroyers, and frigates), submarines, and amphibious ships. Examining the number of ships, total displacement, and the number of missile cells demonstrates that

[110] David Scott, "India's Drive for a 'Blue Water' Navy," *Journal of Military and Strategic Studies* 10, no. 2 (Winter 2007–8): 1.

India is exchanging timeworn platforms for newfangled ones and upgrading its weapons' performance instead of sharply increasing the number of ships. The Navy is increasing the number of its ships, but it is more focused on elevating their quality.

Table 5. Qualitative Measures: Displacement and Missile Complement of Major Naval Platforms[111]

Type	#	1991 Displacement (tons)	Missile Cells	Type	#	2014 Displacement (tons)	Missile Cells
Carriers		***Carriers***					
Viraat	1	29,000	0	Viraat	1	29,000	0
Vikrant	1	19,800	0	Vikramaditya	1	44,500	0
Destroyers		***Destroyers***					
Rajput	5	4,974	6	Rajput	5	4,974	2*30; 1*36 ; 2*38
				Delhi	3	6,200	18
				Kolkata	1	7,500	80
Frigates		***Frigates***					
Godavari	3	3,850	4	Godavari	3	3,850	4
Whitby	2	2,560	3	Nilgri	1	2,962	0
Nilgri	6	2,962	0	Brahmaputra	3	3,850	16
Kamorta	6	1,150	4	Talwar	6	4,035	14
Betwa	1	2,520	0	Shivalik	3	5,600	14
				Kamorta(new)	1	3,500	16
Submarines		***Submarines***					
Kilo	8	2,325	0	Kilo	10	2,325	8*6
HDW 209	2	1,450	0	HDW 209	4	1,450	0
Foxtrot	7	2,000	0	Akula II	1	8,100	4
Amphibious		***Amphibious***					
Kumbhir	8	1,120	0	Kumbhir	4	1,120	0
Magar	1	5,665	0	Magar	3	5,665	0
				Shardul	2	5,665	0
				Jalashwa	1	16,590	0
Total	**51**	**167,657**	**72**	**Total**	**53**	**281,487**	**524**
Increment (%)					**+2 ↑4%**	**+113,830 ↑68%**	**+425 ↑628%**

[111] Ladwig III, "Drivers of Indian Naval Expansion," Table 2.1; "Indian Navy Ships," Indian Navy, last modified May 22, 2015, http://indiannavy.nic.in/naval-fleet/ships.

Regarding military expansion, increased military capability is two-dimensional, centering on both quantity and quality. India's military expansion not only increases the number of missiles, equipment, and personnel but also upgrades military weapons and equipment by replacing old ones. India's military modernization not only increases the quantity of the weapons dramatically, but also raises its military power to a higher level. India's first indigenous aircraft carrier is an example; India eliminated an old weapon and purchased or manufactured a high-performance weapon to replace the old one, thus expanding quality.

1. Security Model

The security model is one of the most appropriate explanations for India's sea power expansion for two primary reasons: robust deterrence and sea control. First, the Indian Navy needs powerful deterrence to prevent a hostile state from harming its interests. The Indian Navy could use its robust sea power to discourage neighbors that seek to undermine its interests and use its nuclear second strike capabilities as a threat of punishment. Second, India relies on sea control to protect its own SLOC; sea control is a vital part of maritime strategy that secures trade and resources.

a. Deterrence

India and China are two great sea powers that have their own vast strategic needs and maritime interests around Asia. Aircraft carriers are the Indian Navy's best conventional weapon to deter an unfriendly power—specifically China. John F. Lehman suggests that "deterrence and war-fighting" are two of the main purposes of the aircraft carriers.[112] Similarly, Admiral E. R. Zumwalt, Jr. (Ret.) also claims that "crisis management and deterrence of full-scale war" are an aircraft carrier's main mission.[113] Aircraft carriers can do so because they are good approaches to deploy armed forces to any area on earth. As Robert Jervis's deterrence model states, "great dangers arise if an

[112] John F. Lehman, *Aircraft Carriers: The Real Choices* (Beverly Hills, CA: Sage Publications, 1978), 12.

[113] Ibid., 6.

aggressor believes that the status quo powers are weak in capability or resolve."[114] That is to say, a state should better be able to display its strong military capabilities to deter a potential threat's aggressive behaviors. According to research from the RAND Corporation, "the Indian Navy hopes to possess three V/STOL carriers . . . , precipitated by Indian fears of regional conflicts spilling over into its security sphere . . . The Chinese presence on the Indian Ocean, which Indian policy-makers now trumpet as an inevitable but troublesome possibility."[115] In the same vein, the *Journal of Military and Strategic Studies* by David Scott claims that India is constructing a "blue water" navy against another emerging "blue water" navy—China.[116] China is building its second and first indigenous aircraft carrier, and some experts note that the "People's Liberation Army Navy (PLAN) needs a total of four carriers by 2020."[117] On the other hand, India is not only constructing its third aircraft carrier but is planning to design another indigenous super carrier, the *Vishal*, which is scheduled to be commissioned by 2025.[118] India and China will be two robust sea powers that might go head-to-head over the Indian Ocean in the next 10 to 15 years. Essentially, a rising China is India's security concern due to its geostrategic significance and economic interests.

First, the Indian Ocean's strategic location is crucial for China to dominate the region. Scott analyzed that "China's 'string of pearls' strategy across the Indian Ocean [has been] causing concern for Indian strategists."[119] Clearly, to become an economic and military hegemon, China needs to not only focus on the Pacific Ocean, but also the Indian Ocean. India is concerned about this focus because India has experienced border disputes and wars with China since 1947. Additionally, China has initiated many conflicts and

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[114] Robert Jervis, *Perception and Misperception in International Politics* (Princeton, NJ: Princeton University Press, 1976), 58.

[115] Ashley J. Tellis, *India: Assessing Strategy and Military Capabilities in the Year 2000* Santa Monica, CA: RAND Corporation, 1996), 8–9.

[116] Scott, "India's Drive for a 'Blue Water' Navy," 1.

[117] Wendell Minnick, "Experts Wary over News of China's 2nd Carrier," *DefenseNews*, January 25, 2014, http://www.defensenews.com/article/20140125/DEFREG03/301250024/Experts-Wary-Over-News-China-s-2nd-Carrier.

[118] Ritu Sharma, "India Plans a 65,000-Tonne Warship," *The New Indian Express*, August 6, 2012, http://www.newindianexpress.com/nation/article583809.ece.

[119] Scott, "India's Drive for a 'Blue Water' Navy," 1.

crises in Asia, such as those in the South China Sea. Accordingly, India's fear of China contributes to its sea power expansion.

Second, China is India's security concern because China seeks to control the sea lines of communication around the Indian Ocean to secure its economic interests. According to *China's "Sea Power Nation" Strategy* by Wu Xiaoyan, "nearly 60 percent of China's imported crude oil arrives through the Indian Ocean via the Malacca Strait into the South China Sea."[120] Similarly, James R. Holmes and Toshi Yoshihara believe that China turns to the Indian Ocean to protect its trade and raw materials.[121] For example, China has frequently dispatched the People's Liberation Army Navy ships to the Gulf of Aden to support anti-piracy operations and to protect its shipping since its economic growth globally.[122] In essence, China might wield its influence around the Indian Ocean to safeguard its own interests, thus threatening India's security and motivating India to expand its Navy as a deterrence tactic. That is to say, if China's economic interests include securing freedom in the Indian Ocean, these interests directly conflict with those of India. Summing up, China's westward gaze threatens India's security and motivates India to expand its Navy by building aircraft carriers to deter China.

The race to build aircraft carriers is a major contest between India and China. According to neo-realist thinking, a state will continually keep growing to maximize relative power under an anarchic system. Therefore, every state would like to have a large and strong Navy if they can. Today, India still only has two active aircraft carriers on hand; more importantly, following the decommissioning of the INS *Vikrant*, India only possessed one aircraft carrier from 1997 to 2013. India needs two aircraft carriers to rotate the duties of its missions. One carrier can do regular maintenance or repair while another can sail on the Indian Ocean to perform its mission. The arms race of aircraft

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120 Wu Xiaoyan, *China's "Sea Power Nation" Strategy* (Stockholm, Sweden: Institute for Security & Development Policy, 2014), 19.

121 James R. Holmes and Toshi Yoshihara, *Chinese Naval Strategy in the 21st Century: The Turn to Mahan* (New York: Routledge, 2008), 25, 61.

122 Eric A. McVadon, "The Reckless and the Resolute: Confrontation in the South China Sea," *China Security* 5, no. 2 (Spring 2009): 4.

carriers between India and China seems to have begun in 2013 when China's first carrier, *Liaoning*, completed its testing and training. Coincidentally, India commissioned its aircraft carrier, INS *Vikramaditya*, the same year and capitalized on its indigenous carrier to reply to China's Russian purchased *Liaoning*. Accordingly, India has a clear intention of using aircraft carriers to deter China.

Aircraft carriers allow India to enforce sea denial, and nuclear submarines are a powerful punishment to persuade adversaries not to impede India's interests. Walter C. Ladwig III states that sea denial is "negating an enemy's ability to use the sea but at the same time making no attempt to control the sea itself."[123] Indian aircraft carriers with combat surface ships can combine air and sea power to prevail over the "Air-Sea Battle."[124] Geoffrey Till use the Air-Sea Battle as a concept that "aims to deter, defeat and disrupt anti-access and and/or area-denial capabilities."[125] This concept is in the same vein as Zumwalt's belief that aircraft carriers are influential tools of crisis management that deter a full-scale war. The nuclear second strike capability of India's submarines provides another form of deterrence—one that encourages states to consider the catastrophic costs of undermining Indian's interests.

b. Sea Control

Sea control is one of the most significant missions that the Indian Navy uses to protect the security of its SLOC. Till defines sea control as that which "denote[s] a navy's capacity to use an area of sea for its own purposes for as long as necessary to achieve those purposes and to deny that ability to others."[126] Additionally, George W. Baer believes that "the first job of the fast-carrier task forces was sea control."[127] The Indian Navy knows sea control is vital and losing sea control is very dangerous because India

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[123] Ladwig III, "India and Military Power Projection," 1173.

[124] Geoffery Till, *Asia's Naval Expansion: An Arms Race in the Making* (Adelphi Series Book 432, New York: Routledge, 2012), 33.

[125] Till, Asia's Naval Expansion, 33.

[126] Ibid., 65.

[127] George W. Baer, *One Hundred Years of Sea Power: The U.S. Navy, 1890–1990* (Stanford, CA: Stanford University Press, 1994), 297.

cannot afford to lose control of sea lanes. The *India Maritime Doctrine 2009* demonstrates that its maritime strategy is based on "the freedom to use the seas for our national purpose, under all circumstances."[128] That is to say, the Indian Navy will do whatever is best to control the Indian Ocean. Furthermore, the *India Maritime Doctrine 2009* concludes that "sea control is the central concept around which the Indian Navy is structured."[129] Aircraft carriers are ideal weapons systems that can "wage war far away from their mainland."[130] India can use aircraft carriers to deploy its military power far away based on their function. Indian officials claimed that, "We aim to exercise selective sea control in the waters of the Indian Ocean by deploying task forces built around the core of aircraft carriers."[131] India could use aircraft carriers to project its power to undertake long-range operations against potential threats from the entire Indian Ocean to the western Pacific Ocean. Accordingly, Indian policy-makers may continually expand naval power to compete against rising hostile neighbors and secure sea control.

Sea lines of control are the lifeline of India's economy because the country's trade and crude oil are heavily dependent on seaborne shipping. About 90 percent of India's goods are traded through the Indian Ocean.[132] Additionally, about 70 percent of India's oil and more than 50 percent of its natural gas are received from Saudi Arabia, Iran, Kuwait, and Iraq.[133] Thus, India's energy mainly comes from the Persian Gulf, which leaders view as "a primary national maritime interest."[134] No wonder India asserts that "maritime security for supply lines and installations will remain a primary responsibility of the Indian Navy."[135] Furthermore, India's maritime strategy explicitly notes that "whatever happens in the [Indian Ocean littoral region] can affect our national security

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[128] Till, *Asia's Naval Expansion*, 75.

[129] Ibid., 75.

[130] Scott, "India's Drive for a 'Blue Water' Navy," 17.

[131] Ibid., 18.

[132] Walter C. Ladwig III, "Drivers of Indian Naval Expansion," in *The Rise of the Indian Navy: Internal Vulnerability, External Challenges*, ed. Harsh V. Pant (London: Ashgate, 2012), 35.

[133] Ibid., 36; Ladwig III, "India and Military Power Projection," 1170.

[134] Till, *Asia's Naval Expansion*, 76.

[135] Ibid.

and is of interest to us."[136] Accordingly, maintaining sea control to protect India's trade and oil to sustaining its economic growth is driving the expansion of its sea power.

2. Norms Model

The norms model is another Indian driver for maritime expansion because the aircraft carrier symbolizes sea power. Furthermore, great sea power projects the image of a superior state. An emerging state like China can sharply enhance national prestige or the identity of a great power by possessing its first aircraft carrier no matter how a state gets it: self-built or purchased. India has owned and operated its first aircraft carrier, the INS *Vikrant*, since 1961, which was decommissioned in January 1997.[137] India has been a regional power since the overwhelming victory of the Indo-Pakistan War in 1971. The INS *Vikrant* played an important role during the Indo-Pakistan War of 1971, and this war proved that India was a great conventional power in South Asia by demonstrating its robust sea, land, and air power since India was the first state to operate aircraft carriers in South Asia, including its competing neighbor, China.

More importantly, after India's acquisition of aircraft carriers in 1987 and 2013, which were the INS *Viraat* and INS *Vikramaditya*, India is building its first indigenous aircraft carrier, the INS *Vikrant*, to illustrate its advances in technology. INS *Vikrant's* building shows India as one of the great powers that has the capability to design and manufacture giant aircraft carriers. INS *Vikrant* is expected to be commissioned by 2017, according to India's Chief of Naval Staff, Admiral D. K. Joshi.[138] That is to say, India could be comparable to the United States by obtaining two aircraft carriers, increasing from one to three, within four years. In addition, India and the United States will be the only two states that possess more than two aircraft carriers in the world. Once a state spends a considerable amount of time and budget to acquire expertise, a state will never

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[136] Ladwig III, "India and Military Power Projection," 1170.

[137] "INS Vikrant, India's First Aircraft Carrier, Sold to Ship-Breaker for Rs 60 Crore," *The Times of India*, April 9, 2014, http://timesofindia.indiatimes.com/india/INS-Vikrant-Indias-first-aircraft-carrier-sold-to-ship-breaker-for-Rs-60-crore/articleshow/33465193.cms.

[138] Ezhimala Kannur, "INS Vikrant to be commissioned by 2017," *The Hindu*, November 24, 2013, http://www.thehindu.com/news/national/ins-vikrant-to-be-commissioned-by-2017/article5384074.ece?ref=relatedNews.

be dependent on any other state again. Therefore, India really enjoys an enhanced international reputation because of its first indigenous aircraft carrier.

Besides, aircraft carriers are conducive to establish India's national identity as a great state. In "The Indian Naval Carrier Experience," C. Uday Bhaskar asserts that India's persuasiveness for building aircraft carriers can uproot the image of a postcolonial weak state.[139] In a comparison of an aircraft carrier's purpose and function, it is an effective way to exhibit a state's influences around the world. India could have used aircraft carriers as a tool for long range maritime diplomacy when the Indian Navy had shown its national flag far in the Indian Ocean and beyond. Even more, India is taking advantage of its blue water Navy to become a regional power and to apply for a permanent UN Security Council seat.[140] The aircraft carrier is a platform that represents an extension of a state's territory and superior sea-power, but it is too expensive for many states to afford.

The pace of aircraft carrier acquisition shows India's economy fully supports its goal to become a symbol of regional sea power. Regarding aircraft carriers' high cost, they are the most expensive pieces of military equipment ever built in the world, so most states see carriers as an unaffordable option.[141] For example, the cost of the CVN-78 class aircraft carrier is at least approximately U.S. $9.8 billion, and the INS Vikrant will be more than U.S. $5 billion.[142] The United States owns the most, the largest, and the best aircraft carriers in the world; besides the United States, Italy and India are the only states to own more than one aircraft carrier.[143] Therefore, aircraft carriers symbolize

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[139] Bhaskar, "The Indian Naval Carrier Experience," 36.

[140] Rajat Pandit, "Navy Makes a 'Blue Water' Mark," *Times of India*, January 7, 2005, http://timesofindia.indiatimes.com/india/Navy-makes-a-blue-water-mark/articleshow/984289.cms.

[141] "10 Most Expensive Weapons," The Richest, accessed May 27, 2014, http://www.therichest.com/business/technology/most-expensive-weapons/.

[142] Ibid.; Vivek Raghuvashi, "India's First Indigenous Carrier Faces Delays, Cost Growth," *DefenseNews*, August 8, 2013, http://www.defensenews.com/article/20130808/DEFREG03/308080007/India-s-First-Indigenous-Carrier-Faces-Delays-Cost-Growth.

[143] "Total Aircraft Carrier Strength by Country," *GFP*, accessed May 31, 2014, http://www.globalfirepower.com/navy-aircraft-carriers.asp. For the purposes of the GFP ranking, helicopter carriers are not included as they lack the overall capabilities inherent in "flat-top" carriers when launching farther-reaching fixed-wing aircraft.

India not just as a great military power, but also an economic one. In terms of sea power expansion, both quantity and quality need to be measured. With regard to quantity, the full-load displacement and number of missile cells of a ship can roughly measure a ship's capability without thoroughly analyzing its weapon, radar, and propulsion systems.[144] According to Table 5, India's Navy has expanded its major naval platforms from 51 to 53 (an increase of 4 percent) since 1991. Although the quality of ships is slowly increasing, the quantity is quickly expanding. The statistics illustrate that the aggregate displacement of the Indian Navy has approximately increased 68 percent since 1991, and the number of missile cells has increased more than six times since 1991. Furthermore, India's upcoming aircraft carrier, its first indigenous carrier, demonstrates that India is committed to economic development and uses its economic growth to develop robust military capabilities to become a great sea power.

The speed of India's aircraft carrier acquisition has captured international attention and no doubt projected its position as a great sea power. The Indian Navy is the fourth largest in the world and one of the great sea powers that owns aircraft carriers and nuclear submarines.[145] Nowadays, the Indian Navy has owned two aircraft carriers to dominate the Indian Ocean since the INS *Vikramaditya* was commissioned in 2013. India, Italy, and the United States are the only states that own more than one aircraft carrier in the world.[146] India's ambition is demonstrated in the *New York Times*' headline: "Land of Gandhi Asserts Itself as Global Military Power."[147] According to the news report, William S. Cohen, a secretary of defense in the Clinton administration, contends that "India sees itself in a different light—not looking so much inward and looking at

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[144] Ladwig III, "Drivers of Indian Naval Expansion," 22.

[145] "Overall and Navy Strength Ranking," *GFP*, accessed May 27, 2014, http://www.globalfirepower.com/navy-ships.asp; Kannur, "INS Vikrant to be Commissioned by 2017," http://www.thehindu.com/news/national/ins-vikrant-to-be-commissioned-by-2017/article5384074.ece?ref=relatedNews; Mala Das, "Visakhapatnam: One Killed, Two Hurt in Accident at Nuclear Submarine Construction Site," *NDTV*, March 9, 2014, http://www.ndtv.com/article/india/visakhapatnam-one-killed-two-hurt-in-accident-at-nuclear-submarine-construction-site-493315.

[146] "Total Aircraft Carrier Strength by Country," http://www.globalfirepower.com/navy-aircraft-carriers.asp.

[147] Anand Giridharadas, "Land of Gandhi Asserts Itself as Global Military Power," *New York Times*, September 21, 2008, http://www.nytimes.com/2008/09/22/world/asia/22india.html?pagewanted=all&_r=0.

Pakistan, but globally."[148] A state that owns aircraft carriers can deploy its military strength anywhere around the world using its elaborate aircraft carrier battle group. In other words, the aircraft carrier is a means to enhance global influence.

Establishing a robust Navy is one of best ways to become a great power because more than 70 percent of the earth's surface is covered by ocean. According to the comparison of characteristics and capabilities of the Navy, the Army, and the Air Force, the Navy is the most powerful way to deploy a state's armed forces around the world and extends a state's homeland and power. For example, Ladwig points out that "the Indian Navy has undertaken several high-profile deployments to the South China Sea and the Persian Gulf," and he contends that such deployments are significant signs of India's sea power across the Indian-Pacific region.[149] Indian External Affairs Minister Pranab Mukherjee made a speech in *International Relations and Maritime Affairs* to claim how significant India's Navy is: "Within the larger maritime canvas, it is our nation's military maritime power—as embodied by the Indian Navy . . . that is the enabling instrument that allows all the other components of maritime power to be exercised."[150] Along the same lines, Admiral Sureesh Mehta proudly claim the significance of India's blue water capability after he served as chief of Naval Staff: "Our ships have to be placed at distant places. If our ships are present far away from home, we can do something to raise the prestige of the nation."[151] Accordingly, the norms model is one of the strongest explanations for India's program of constructing its aircraft carriers.

3. Domestic-Politics Model

India's domestic-politics support is critical evidence that has underpinned its maritime power expansion since the Post-Cold War. The Bharatiya Janata Party (BJP) and Congress-led government claim that India should put more focus on the Navy instead of a Cinderella service among armed forces. Different ruling parts hold the same policy

[148] Giridharadas, "Land of Gandhi Asserts Itself as Global Military Power."

[149] Ladwig III, "India and Military Power Projection," 1168.

[150] Scott, "India's Drive for a 'Blue Water' Navy," 5.

[151] Ibid.

of naval modernization, and both of them won public support to implement their policy because the Indian people are proud of these accomplishments. After all, constructing an aircraft carrier is difficult because few people or states have the expertise to do so. INS Vikrant, India's first indigenous aircraft carrier, will be a source of pride that demonstrates the state's hegemonic power and its robust economy, as well as the skillful knowledge of its people and its advanced technology. Jaswant Singh is an Indian politician who asserts that naval neglect was a sad case before the 1990s. He says that "Today, the India navy faces a crisis in terms of its rapidly declining force levels, lack of sufficient funding, and limited warship construction programs."[152] His Prime Minister, Atal Bihari Vajpayee, a leader of BJP, also aimed at building "blue water" capacity and decided to increase funding and naval modernization.[153] Even in May 2004, Manmohan Singh, the Congress-led administration, continually adopted the policy of shaping a blue-water navy. The Indian government increased the IN's defense budget from $7.5 billion for the years 1997–2001 to $18.3 billion for 2002–2007. Additionally, IN's share of the defense budget had increased from 11.2 percent in 1992–93 to 18.26 percent in 2007–08.[154] These political elites all played important roles to drive India's maritime expansion.

Besides Indian political elites, naval senior officers make efforts to push the Indian Navy's modernization and to win the aircraft carriers debate among different military branches. For example, *The Times of India* reports a senior naval officer's point of view that shows blue-water capability is imperative: "We have proved the Navy can be used as a diplomatic instrument in support of our political and geo-strategic objectives. Unlike the Army and Air Force, the Navy is a trans-national force, not circumscribed by a country's international boundaries or airspace."[155] The Indian Air Force (IAF) worries that its budget might be transferred to the IN, which exposes IN's vulnerability, that is

[152] Jaswant Singh, *Defending India* (New York: St. Martin's Press, 1999), 127.

[153] Scott, "India's Drive for a 'Blue Water' Navy," 5.

[154] Scott, "India's Drive for a 'Blue Water' Navy," 13–14.

[155] Pandit, "Navy Makes a 'Blue Water' Mark."

"aircraft carriers can be sunk, while a shore-based airfield cannot be."[156] Navy planners counter IAF with stronger viewpoints to protect the Navy's interests in maritime modernization. Naval officers argue that Navy fighters can take off from aircraft carriers within less than five minutes to attack any shore-based fighters before the enemy spends two hours flying to approach carriers. Vice Admiral Anup Singh even argues that the Navy should possess its own fighters and train skills of maritime flying, and IN doubts IAF's capability to support maritime operations.

Furthermore, bureaucratic factors also drive India's naval modernization. The aircraft carrier option is unaffordable for most states due to limited budget and skill deficiencies. Comparatively speaking, China acquired its first aircraft carrier very late—in September 2012—because China's economy and technology might not have been advanced enough to possess an aircraft carrier in the early 1970s.[157] However, nowadays, India's indigenous shipbuilding and defense industries are skillful and knowledgeable enough to support and push IN's program of modernization. India's capabilities in shipbuilding industries are impressive at various levels. These industries indigenously build Delhi-class destroyers, not to mention frigates. Meanwhile, India is conducting its indigenous nuclear submarine and indigenous aircraft carrier project. The progress of the military-related industries is one of the requirements to drive India's naval modernization.

4. Conclusion

Compared with the norms and domestic-politics models, the security model is the most appropriate explanation for why India wants high budget expenditures to expand its maritime capabilities. The Indian Navy may want to enlarge its size and modernize its weapons to gain powerful deterrence and sea control. India needs sea power to deter its hostile neighbors, especially emerging sea powers like China, and aircraft carriers can provide many capabilities of a great maritime power. China is India's biggest threat

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156 Ajai Shukla, "INS Vikramaditya Settles the Aircraft Carrier Debate," *Business Standard Budget Analysis*, November 15, 2013, http://www.business-standard.com/article/current-affairs/ins-vikramaditya-settles-the-aircraft-carrier-debate-113111501134_1.html.

157 Behind the Wall, "China Brings its First Aircraft Carrier into Service," *NBC NEWS*, September 25, 2012, http://behindthewall.nbcnews.com/_news/2012/09/25/14092055-china-brings-its-first-aircraft-carrier-into-service-joining-9-nation-club.

because of its string of pearls' strategy and economic dependence on the Indian Ocean. Therefore, India's previous conflicts and crises with China create fear and distrust that contribute to its sea power expansion, and aircraft carriers are powerful weapons to enforce sea denial and to provide catastrophic punishment, if necessary. Additionally, India may use robust aircraft carrier fleets to control the Indian Ocean and to protect its trade and natural energy on its SLOC. Geographically, India needs aircraft carriers to safeguard its maritime interests across the whole Indian Ocean from the Persian Gulf to the Strait of Malacca and even beyond. Accordingly, India has to expand its sea power to deter the rising threat of Chinese expansion and to provide security of the SLOC.

The security model alone, however, is inadequate to explain India's sea power expansion; the norms and domestic-politics models are two jigsaw puzzle pieces that bring the whole picture of India's maritime expansion into focus. With regard to the norms model, India's aircraft carriers symbolize a great sea power. Besides India's national identity, India could use indigenous aircraft carriers to symbolize its technologically advanced state as well. Additionally, domestic-politics contribution to India's sea power expansion cannot be ignored. India's naval senior officers try their best to win the debate over aircraft carriers and to persuade political elites into legislating a blue water policy. Furthermore, India's capabilities of military-related industries can support policy makers in expanding maritime capabilities. Accordingly, one model cannot fully explain the reason why a state continuously expands its sea power. Although the security model provides the best single explanation of India's naval expansion, a comprehensive explanation of India's expansion combines all three models.

IV. CONCLUSION

A. OVERVIEW

What motivates India to expand its military capability? The evidence demonstrated in this thesis suggests that security concerns are a stronger explanation than the norms and domestic-politics models. The three models—the security, the norms, and the domestic-politics models—are all indispensable pieces to the puzzle of explaining India's military expansion. More specifically, the causes discussed in these three models are interrelated and affect one another in a sometimes cyclical pattern. However, this thesis suggests that the security model is the biggest piece of the jigsaw puzzle in explaining the whole picture of India's military expansion.

In regard to India's overall nuclear weapons and delivery systems, all three models are applicable, but the security model explains the most. India's distrust of its neighbors has provoked its survival instinct, which is the security concern that initially motivated the nuclear program. China and Pakistan are two of the biggest potential threats that India faces, and these threats continually motivate India's development of nuclear arsenals and also multiple delivery systems and platforms, such as ballistic missiles and sea-based launchers. However, India's nuclear program would not continue without domestic factors like public support, bureaucratic sustenance, and the national sentiment of anti-colonialism. In terms of the norms model, these domestic factors encourage the government to pursue methods that will enhance India's status as a great power and further fuel the population's desire to support India. This status as a great power is what India wants when its economy is rising and global influence is needed. Furthermore, other aspects of domestic-politics influence India to expand its military. For example, once India's nuclear-related organizations or laboratories were technologically advanced enough to support nuclear weapons, scientists started pushing further to ensure that their budgetary support and positive reputation would continue. Additionally, India's political elites discovered that nuclear issues could enhance their public support, causing them to make nuclear decisions.

The development of India's conventional weapons, such as its aircraft carriers, can be explained in a similar manner to its nuclear program; the security model is the best explanation, but all three models are required for a comprehensive understanding. India uses aircraft carriers to provide robust deterrence against China and to secure sea control across the Indian Ocean to the western Pacific Ocean. India's fears do not just derive from China's rise and previous conflicts, but also from any threats to its seaborne shipping globally. Beyond the security considerations, the norms and domestic-politics models also explain India's military expansion. India's aircraft carriers clearly symbolize a great power by demonstrating a strong military and advanced technology. This symbol bolsters the Indian population's confidence, strengthening nationalism and fueling the anti-imperialist sentiment. A confident public then supports policymakers to continually push naval modernization. This cycle encourages India to expand its maritime capabilities. However, India's aircraft carriers are the best viable option for its maritime security area, which extends across the vast expanse from the Western Indian Ocean to the Eastern Pacific Ocean. Instead, India already has considerable high-tech equipment to demonstrate its prestige around the world, such as ballistic missiles and space exploration programs.

Although the two case studies of India's nuclear weapons and its conventional weapon, aircraft carriers, may not be enough to explain India's military expansion overall, these are the two most powerful and expensive weapons and therefore demonstrate most of India's policymakers' logic in their decision-making. India's cases can be explained by a combination of security, norms, and domestic-politics models. Although the security, the norms, and the domestic-politics models all explain India's military expansion to some degree, the analysis of these two cases suggests that the security model has the most explanatory power.

B. IMPLICATION FOR THE REGION—SOUTH ASIA'S FUTURE INSTABILITY

For India, military expansion has multiple causes as demonstrated by the security, norms, and domestic-politics perspective. This expansion can only continue as long as the country's economy supports it. Furthermore, this expansion could result in a security

dilemma that provokes its hostile neighbors toward an arms race. That is to say, India's behavior of military expansion might destabilize the region of South Asia.

Many scholars debate whether nuclear and conventional expansion will affect South Asia's stability. For example, Kenneth Waltz and Sumit Ganguly believe that "nuclear weapons do not make nuclear war likely" because "nuclear weapons threaten to make conflict catastrophically costly."[158] On the other hand, S. Paul Kapur and Scott Sagan argue that "India and Pakistan face a dangerous nuclear future" because "new proliferators will lead to deterrence failures and accidental uses of nuclear weapons."[159] Beyond nuclear weapons expansion, conventional power expansion and uncompromising struggles of territorial disputes among India, China, and Pakistan put the region's future in danger. India, China, and Pakistan are the only three states in the world that are not conducting nuclear disarmaments and are in fact increasing their nuclear arsenals.[160] In addition, India, China, and Pakistan have been the top three arms importers for the past five years since 2009.[161] Particularly, India and China are already the two largest blue naval powers around the region. This thesis argues that South Asia will become more unstable in the next 10 to 15 years because of organizational errors, the rising demand of natural energy, and deterrence failures.

1. Organizational Errors

Standard Operating Procedures (SOPs) in an organization are a good way to save time and cost, but they are not always applicable to every crisis. Graham Allison and Philip Zelikow claim that "SOPs constitute routines for dealing with standard situation," but "critical instances that typically do not have 'standard' characteristics, are often

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[158] Scott D. Sagan and Kenneth N. Waltz, *The Spread of Nuclear Weapons: An Enduring Debate, 3rd ed.* (New York: W. W. Norton, 2013), 17; Ganguly and Kapur, *India, Pakistan, and the Bomb*, 3.

[159] Ibid., 77; Ganguly and Kapur, *India, Pakistan, and the Bomb*, 20.

[160] Kile and Schell, "Military Spending and Armaments: Nuclear Forces," http://www.sipri.org/research/armaments/nuclear-forces.

[161] Wezeman and Wezeman, "Trends in international arms transfers, 2013," 4, http://books.sipri.org/files/FS/SIPRIFS1403.pdf.

handled sluggishly or inappropriately."[162] Rational decision makers will set goals, prioritize crises, think of possible outcomes, and choose the best outcome for the final decision. For example, if Kennedy followed SOPs, he would have never phoned Khrushchev directly and brought peace to both sides. Accordingly, following SOPs could occasionally lead to the wrong decision, and this might destabilize the region because tensions might escalate to a full-scale nuclear war or brutal conventional war.

Additionally, one state's SOPs or doctrines could cause regional instability between hostile states because of another state's misunderstanding and overreactions. For instance, India's Cold Start military doctrine, which divided its three main strike corps into eight "integrated battle groups" (IBGs) and currently allows these eight IBGs to efficiently combine armed forces and launch attacks into Pakistan, triggers danger between India and Pakistan for two reasons.[163] First, Pakistan's fear of threats to its security may make regional instability worse. Pakistan is a comparatively weak adversary that will highly enhance its military alertness. Similarly, India will remain ready for a military response from Pakistan. Therefore, the doctrine would exacerbate regional tension.

Second, the Cold Start doctrine could easily and quickly escalate Indo-Pakistani crises into a large-scale conventional war, or perhaps even a nuclear war. In regard to conventional war, Vijay Oberoi in *India, Pakistan, and the Bomb* suggests that the Cold Start doctrine "makes political will [of the decision to attack Pakistan] more likely to be there, since now we can mobilize before world opinion comes down on political leaders and prevents them from acting."[164] In terms of nuclear war, India's doctrinal change forces Pakistan to depend on nuclear weapons' deterrence due to the conventional power asymmetry. Accordingly, the Cold Start may destabilize South Asia. Most importantly, if a territorial dispute or conflict breaks out, nuclear war may become a reality.

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[162] Graham T. Allison and Philip Zelikow, *Essence of Decision: Explaining the Cuban Missile Crisis* (New York: Longman, 1999), 178.

[163] Zafar Namaz Jaspal, "Tactical Nuclear Weapon: Deterrence Stability between India and Pakistan" (2012), 4.

[164] Ganguly and Kapur, *India, Pakistan, and the Bomb*, 77.

The prevalence of nuclear and conventional weapons would be the earth's ticking time bomb—accidents are likely to happen.[165] Waltz believes that "we have enjoyed half a century of nuclear peace, but we can never have a guarantee."[166] Regional or international instability could escalate to full-scale nuclear war due to the prevalence of nuclear weapons or accidental launches. Beyond nuclear weapons, advanced technology like the powerful ballistic missile could produce catastrophic destruction. Moreover, the criteria or procedures for launching a missile differ by regime type and by operator. In military-led states, such as Pakistan, command and control of missiles could be loose, and some states might shoot mistakenly because of inadequate training.

Furthermore, the international community would be mistaken if it passively allowed instability to develop among India, China, and Pakistan. For example, Kapur mentions that jihadis or terrorists in Pakistan might steal nuclear or conventional weapons during their transportation in extreme situations because insiders or spies divulge the transport schedules.[167] That is to say, Pakistani terrorists would likely seek opportunities to obtain nuclear weapons and could potentially attack any city around India. For example, Sagan notes that Al Qaida has recruited senior Pakistani nuclear scientists to assist in developing bombs.[168] Terrorists are radical groups that do not respect civilian life when attempting to achieve their organization's goals. This is the lesson we learned from the 2008 Mumbai attacks.

In addition, the possession of nuclear weapons among India, China, and Pakistan is risky and dangerous because of "preemptive instability."[169] A small and weak nuclear state like Pakistan may fear its robust conventional enemy, India—especially the state's first strike capabilities and its aggressive invasion tactics. Therefore, Pakistan's fear might produce a nuclear first strike strategy to prevent it from being annihilated by stronger adversaries. Accordingly, Devin Hagerty points out that some scholars firmly

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[165] Sagan and Waltz, The Spread of Nuclear Weapons, 82.

[166] Ibid., 33.

[167] Ganguly and Kapur, *India, Pakistan, and the Bomb*, 93.

[168] Sagan and Waltz, *The Spread of Nuclear Weapons*, 216.

[169] Hagerty, *The Consequences of Nuclear Proliferation*, 152.

expect "that the next time nuclear weapons are fired—either in anger or inadvertently—it will be the result of a crisis between two Third World states with small nuclear forces."[170]

2. Rising Demand of Natural Energy

India and China's dependence on oil and gas contribute to their maritime power expansion, and this sea power expansion is leading them toward a risky future. The arms race of sea power expansion between India and China seems white-hot—one that appears to have begun in 2013 when China's first carrier, *Liaoning*, completed testing. Coincidentally, India commissioned its aircraft carrier, INS *Vikramaditya*, the same year and capitalized on its indigenous carrier to reply to China's purchase. In addition, China is building its second and first indigenous aircraft carrier, and some experts note that the "People's Liberation Army Navy needs a total of four carriers by 2020."[171] On the other hand, India is not only constructing its third aircraft carrier but is planning to design another indigenous super carrier, the *Vishal*, which is scheduled to be commissioned by 2025.[172] That is to say, India and China will be two robust sea powers that might go head-to-head over the Indian Ocean in the next 10 to 15 years.

Sea lines of control are the lifeline of India's economy because the country's trade and crude oil are heavily dependent on seaborne shipping. Kapur claims that "India's impressive expansion has created an enormous need for energy."[173] About 90 percent of India's goods are traded through the Indian Ocean.[174] Additionally, about 70 percent of India's oil and more than 50 percent of its natural gas are received from Saudi Arabia, Iran, Kuwait, and Iraq.[175] Thus, India's energy mainly comes from the Persian Gulf,

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[170] Hagerty, *The Consequences of Nuclear Proliferation*, 152.

[171] Minnick, "Experts Wary over News of China's 2nd Carrier," http://www.defensenews.com/article/20140125/DEFREG03/301250024/Experts-Wary-Over-News-China-s-2nd-Carrier.

[172] Sharma, "India Plans a 65,000-Tonne Warship," http://www.newindianexpress.com/nation/article583809.ece.

[173] Ganguly and Kapur, *India, Pakistan, and the Bomb*, 74.

[174] Ladwig III, "Drivers of Indian Naval Expansion," 35.

[175] Ladwig III, "Drivers of Indian Naval Expansion," 36; Ladwig III, "India and Military Power Projection," 1170.

which leaders view as "a primary national maritime interest."[176] Policymakers in India believe that "maritime security for supply lines and installations will remain a primary responsibility of the Indian Navy."[177] Furthermore, India's maritime strategy explicitly notes that "whatever happens in the [Indian Ocean littoral region] can affect our national security and is of interest to us."[178] Accordingly, India and China might escalate conflicts to safeguard their own economic interests, making the region poised to experience instability in the next decade.

3. Deterrence Failure

Power asymmetry and nuclear weapons may destabilize South Asia in the future due to a deterrence failure between India and Pakistan. Professor Kapur's perspective of strategic pessimism explains that "a weak, dissatisfied proliferator [like Pakistan] would challenge existing territorial arrangements [with India] in the belief that its insulation from all-out retaliation, and its ability to attract international attention, would afford it a significant chance of achieving its politico-military goals."[179] Nuclear deterrence might fail because Pakistani leaders believe that the country would obtain more benefits than losses if it launched a nuclear war with India. If an Indo-Pakistani nuclear war breaks out, Pakistan would become equal with India. On the other hand, India's losses would be enormous and far greater than Pakistan's.

There are two conditions in South Asia that could encourage nuclear weapons to destabilize the region. First, Pakistan could use nuclear weapons as a shield against India's superior conventional military capabilities. Nuclear weapons are a great equalizer for relatively small states such as Pakistan. In essence, nuclear weapons do not eradicate conflicts; on the contrary, they put South Asia under the high risk of full-scale nuclear war. Waltz believed that India and Pakistan would share sustained peace after their

[176] Till, "Naval Modernization," 76.

[177] Ibid.

[178] Ladwig III, "India and Military Power Projection," 1170.

[179] Ganguly and Kapur, *India, Pakistan, and the Bomb*, 31–32.

nuclear test in 1998.[180] However, the casualties rose in number after 1998's test. For example, the Kargil War in 1999 left more than 1,000 dead from conventional warfare. Additionally, Kapur's main thesis is that "nuclear weapons have played an important role in destabilizing the subcontinent."[181] In other words, nuclear weapons did not pull India and Pakistan back from the brink of war but led them to another, more dangerous, conflict.

Second, in *India, Pakistan, and the Bomb,* Kapur contends that nuclear weapons "could create diplomatic incentives for a weak, dissatisfied state to engage in destabilizing behavior."[182] The intervention of a third party, such as the United States or the UN, for a weak state could affect bilateral negotiations with a strong state. Pakistan is dissatisfied about what it considers an unfair allotment of resources and power, and this uneven distribution also leads to a power asymmetry between India and Pakistan. Therefore, the territorially dissatisfied and militarily weak Pakistan may have a diplomatic incentive to provoke a nuclear crisis to receive more attention from the international community. In terms of the Kargil War in 1998 and the border crisis in 2001, Pakistan successfully caught the United States' attention and ended all wars. Accordingly, Pakistan's economy and conventional forces are weak, but nuclear weapons provide Pakistan with a voice to draw the attention of the third party to accomplish its goal and to destabilize the subcontinent.

4. Conclusion

South Asia's enduring territorial disputes, combined with its expansion of conventional and nuclear power, produce fear, uncertainty, and tension among the rivals of India, China, and Pakistan. Organizational problems may further destabilize the region due to the SOPs of different countries, the Cold Start doctrine, and human errors. Individual SOPs are not always right for every situation, and India's doctrinal changes may have destabilizing effects on South Asia. Human errors, which include accidents and

[180] Sagan and Waltz, *The Spread of Nuclear Weapons,* 223.

[181] S. Paul Kapur, "Ten Years of Instability in a Nuclear South Asia," *International Security* 33:2 (Fall 2008), 92.

[182] Ganguly and Kapur, *India, Pakistan, and the Bomb,* 30.

the actions of terrorists, may also contribute to regional instability. Furthermore, the arms race between India and China could trigger dangerous crises. While the consumption of oil and gas has led to India and China's economic growth, the security of natural energy is now critical and has triggered Indo-Sino naval power expansion. This arms race has resulted in weapons expansion and increased tensions in the Indian Ocean. Since Pakistan's conventional power is weaker than India's, nuclear power could become Pakistan's shield to achieve its politico-military goals. Through its provocative behavior, Pakistan is demonstrating a nuclear deterrence failure and creating increased instability in the region.

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